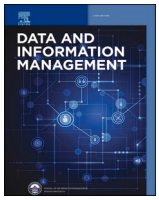
8 (2024) 100066

Contents lists available at ScienceDirect

Data and Information Management

journal homepage: www.journals.elsevier.com/data-and-information-management



Generative AI: A systematic review using topic modelling techniques

Priyanka Gupta [a], Bosheng Ding [b], Chong Guan [c,*], Ding Ding [a]

[a] School of Business, Singapore University of Social Sciences, Clementi Road, 599494, Singapore
[b] Nanyang Technological University, Nanyang Avenue, 639798, Singapore
[c] Centre for Continuing and Professional Education, Singapore University of Social Sciences, Clementi Road, 599494, Singapore

ARTICLE INFO

Keywords:
Generative artificial intelligence
Systemic review
Topic modeling
BERTopic
ChatGPT
Use cases

ABSTRACT

Generative artificial intelligence (GAI) is a rapidly growing field with a wide range of applications. In this paper, a thorough examination of the research landscape in GAI is presented, encompassing a comprehensive overview of the prevailing themes and topics within the field. The study analyzes a corpus of 1319 records from Scopus spanning from 1985 to 2023 and comprises journal articles, books, book chapters, conference papers, and selected working papers.

The analysis revealed seven distinct clusters of topics in GAI research: image processing and content analysis, content generation, emerging use cases, engineering, cognitive inference and planning, data privacy and security, and Generative Pre-Trained Transformer (GPT) academic applications. The paper discusses the findings of the analysis and identifies some of the key challenges and opportunities in GAI research.

The paper concludes by calling for further research in GAI, particularly in the areas of explainability, robustness, cross-modal and multi-modal generation, and interactive co-creation. The paper also highlights the importance of addressing the challenges of data privacy and security in GAI and responsible use of GAI.

1. Introduction

Generative Artificial Intelligence (GAI) has opened up new possibilities across diverse domains, including clinical care (Nastasi et al., 2023; Duong & Solomon, 2023; Jeblick et al.), education (Kasneci et al., 2023/04; Lin, 2023), art and music (Civit et al., 2022; Oksanen et al., 2023) and design (Jiang et al., 2023). It has transformed interactions with the broader public, emerging as an influential instrument that effortlessly connects with users in a multitude of settings (Guan et al., 2023). Unlike predictive AI, which leverages historical data to predict future events, GAI could maintain a 'context window' informed by extensive datasets from its pre-training and incorporate human feedback to direct its algorithms (McKinsey & Companya). This allows for the synthesis of novel content across multiple modalities—including text, images, audio, programming code, simulations, and videos—that is contextually pertinent (Tilton et al., 2023). In 2021, the Global GAI Market Size reached USD 7.9 Billion, and it is projected at a Compound Annual Growth Rate (CAGR) of 34.3% from 2022 to 2030, reaching a market size of USD 110.8 Billion by 2030 (Acumen Research and Consulting).

GAI offers numerous benefits to companies, encompassing cost reduction and enhanced workforce productivity through task automation that replaces manual intervention (Brynjolfsson et al., 2023). Examples of these tasks include images and artwork generation based on textual prompts like DALL-E and Midjourney (Abduljawad & Alsalmani, 2022), semantic image-to-photo translation or image-to-image conversion/manipulation tools like Pix2Pix (Zhao & Ma, 2018), video prediction/generative tools like Synthesia (Dwivedi, Pandey, et al., 2023), music composition tools like Amper Music (Hsu & Ching, 2023), personalized content creation like Designs.ai, and general-purpose conversational generation tools like OpenAI's ChatGPT or Google's Bard, which not only offer a highly informative and integrated conversation to users, but also could develop code and conduct code review and bug fixing or, among other functionalities (Hsu & Ching, 2023). Gartner has identified five prominent applications of GAI that are rapidly advancing and finding utility across various industries. These include drug design, chip design, material science, synthetic data generation, and the generative design of parts (Gartner). The ability of technology to exhibit creativity in these areas has the potential to revolutionize the enterprise landscape. According to McKinsey, GAI is poised to unleash the next wave of productivity and has the potential to generate $2.6 trillion to $4.4 trillion in value across industries

* Corresponding author.
E-mail addresses: priyanka@suss.edu.sg (P. Gupta), BOSHENG001@e.ntu.edu.sg (B. Ding), guanchong@suss.edu.sg (C. Guan), dingding@suss.edu.sg (D. Ding).

https://doi.org/10.1016/j.dim.2024.100066
Received 30 June 2023; Received in revised form 15 November 2023; Accepted 30 January 2024
Available online 15 February 2024

(McKinsey & Companyb).

GAI has sparked significant research interest from scholars in various domains. Extensive literature has been dedicated to exploring different aspects of GAI, encompassing a wide range of topics such as technological advancements (Ce Zhou et al., 2023; Omar et al.; Chien-Chang Lin & Yang, 2023), commercial and non-commercial applications (Luo et al., 2022; Sakib Shahriar, 2023; Shaji George & Gabrio Martin, 2023), ethical considerations (Kasneci et al., 2023/04; Susnjak; Mhlanga, 2023) and regulatory frameworks (Dwivedi et al., 2023/08; Helberger & Diakopoulos, 2023). Despite this surging popularity, there has been a lack of a comprehensive literature review that consolidates the main discoveries from the existing body of GAI research, specifically examining significant use cases across sectors.

This paper presents an extensive exploration of the dominant themes and topics addressed in previous research concerning GAI using topic modeling techniques. The investigation involves conducting a thorough examination of scholarly literature within the field, by analyzing a dataset consisting of 1319 records gathered from Scopus, covering the period from 1985 to 2023. Literature encompasses a wide range of academic sources, including journal articles, books, book chapters, conference papers, and selected working papers. To perform topic modeling on the corpus, the study employed the BERTopic algorithm. We found that there have been increasing applications across diverse disciplines, demonstrating their effectiveness in sequential processes such as text or speech analysis, as well as various image-related tasks including object detection and classification.

2. Literature review

GAI refers to a broad category of artificial intelligence that focuses on synthesizing—and/or generating—content or data that is often indistinguishable from human-generated content (Ebert & Louridas, 2023; Guan et al., 2023). Research on conversational chatbots can be traced back as early as the 1970s, using rule-based pattern matching and simple scripted responses (Weizenbaum, 1966), such as ELIZA by MIT professor Joseph Weizenbaum (Weizenbaum, 1966), Student's Consultant on Heuristic ALgorithms (SCHOLAR) (Carbonell, 1970) and MYCIN (Shortliffe et al., 1975). These early explorations are unable to generate novel text or possess a deep understanding of the context of conversations, thus not categorized as GAI in the modern sense.

The state-of-the-art models in GAI are rooted in the use of large language models (LLMs) (Fan et al., 2023), typically trained on extensive datasets encompassing web crawls, books, social media, and encyclopedias, but the training process and dataset size can vary depending on the specific chatbot implementation (Shanahan, 2022). The field of GAI emerged from these domains and has since evolved into a diverse field encompassing various themes and paradigms. Drawing upon the digital literacy maturity (DLM) framework (Sharma et al., 2016, 2018), we suggest that the core components necessary for emerging technologies to foster development and socio-economic prosperity include Innovation, Education & Human Capital, Infrastructure and Techniques, and Governance, all of which merit further investigation.

Most literature reviews have been conducted focus on specific domain specific Innovations in GAI, such as healthcare (Garg et al., 2023; Ng, 2023; Sallam, 2023; Sim et al., 2023), education and research (Bahroun et al., 2023; Imran & Almusharraf, 2023; Yue et al., 2022), art and entertainment (Civit et al., 2022; Oksanen et al., 2023), and urban and structural design (Afzal et al., 2023; Jiang et al., 2023). Healthcare and education represent the most review papers in GAI. In the medical field, the reviews suggest that GAI demonstrated significant performance and utility in pediatric radiology (Ng, 2023), phenotyping, disease prediction, and pipeline development (Sim et al., 2023) and medical education and research (Garg et al., 2023; Sallam, 2023), but authors cautioned about methodological weaknesses and accuracy issues that need to be addressed for broader clinical adoption. Education represents another key focus of existing literature reviews, highlighting GAI's versatile applications in pedagogical and assessment design use cases as well as ethical considerations (Bahroun et al., 2023; Yue et al., 2022). Other review papers delve into the trends and distribution of research on AI-based music generation and visual arts, suggesting that while AI-generated art is often indistinguishable from human-created art, the latter is generally valued more (Walczak & Cellary, 2023). Review articles on urban and structural design found generative computational methods capable of reconciling conflicting stakeholder objectives and optimizing project outcomes (Afzal et al., 2023; Jiang et al., 2023). Although the domain-specific review papers provide deep insights for reference for both academic and industry stakeholders within the sector, they lack a comprehensive overview of the interdisciplinary perspective. Among the cross-disciplinary reviews, the authors either focus on a single tool type (Alsharhan et al., 2023, pp. 1–13; Singh & Singh, 2023), only include a very small set of empirical studies (Alsharhan et al., 2023, pp. 1–13), or do not employ a systematic review methodology (Fui-Hoon Nah et al., 2023). These reviews aid in identifying and comprehending the sources, focuses, and context of the extensive literature available (Alsharhan et al., 2023, pp. 1–13; Fui--Hoon Nah et al., 2023; Singh & Singh, 2023), but a comprehensive and interdisciplinary systematic literature review on GAI is necessary, going beyond the examination of individual tools. Such a review would offer a holistic understanding of GAI's advancement across various sectors, enabling researchers and practitioners to gain insights into trends, key issues, opportunities, and challenges associated with its methodologies, application, compliance frameworks and human-technology interactions. Building upon the DLM framework (Sharma et al., 2016, 2018), our systematic review can provide a structured approach to conducting a systematic literature review in the field of GAI. The Innovation elements help identify studies on how GAI contributes to new solutions and business models across various sectors. Infrastructure and Techniques are the foundation of GAI, which focuses on studies of data architectures, computational resources, and the methodologies necessary for the development and implementation. Governance in the context of GAI involves research on the policies, regulations, ethical standards, and guidelines that are in place or are required to ensure responsible development and adoption. Lastly, Education & Human Capital aspect exploring the educational and skill requirements necessary for effectively deploying GAI, which provides a stocktake of the current state of human-technology interactions, identify future research gaps on learning and development of expertise in GAI in the workforce. This comprehensive perspective is essential in preventing fragmented research and promoting interdisciplinary collaboration within the field of GAI research.

3. Methodology

This paper offers a thorough examination of the prevalent themes and subjects explored in prior research pertaining to GAI. This investigation is carried out through a comprehensive analysis of the academic literature in the field using topic modelling techniques. Scopus and Web of Science (WoS) stand as preeminent bibliometric databases, while Scopus exhibits a more extensive coverage, incorporating over 20,000 peer-reviewed journals sourced from diverse publishers (Fahimnia et al., 2015; Verma et al., 2021; Yong-Hak, 2013). It has been widely adopted as a key source of data for systematic literature review in AI-related fields (Spanaki et al., 2022; Verma et al., 2021). Scopus was selected as the primary source for data collection. The study analyses a corpus of 1455 records from Scopus, a prominent database encompassing abstracts and citations of peer-reviewed literature across various domains. The literature spans from 1985 to 2023 and comprises journal articles, books, book chapters, conference papers, and selected working papers. The search targeted works related to GAI, using two sets of keywords, namely "GAI" and "Generative" + "AI", where the latter search string yielded a subset within the more extensive list obtained by the former. The dataset predominantly consists of research articles and conference

papers (>80%), with a noticeable surge (>90%) in publications post-2017. Subsequently, a thorough examination of the abstracts within the aforementioned collection was conducted, resulting in the exclusion of unqualified records. Ultimately, 1319 records were retained for the final analysis (see Appendix A).

Fig. 1 illustrates the temporal distribution, emphasizing an exponential growth in research output from 2018 to 2022. Fig. 2 elucidates the distribution by document type. The study meticulously evaluates each document, considering its relevance and kind, to create a refined dataset. Scopus's indexed keywords, author keywords, and pre-publication records known as Articles in Press, are also considered. The exhaustive investigation encompasses data papers, editorials, errata, letters, notes, reviews, and short surveys, often reassessing and re-categorizing them based on content.

Topic modelling is a widely employed technique in the fields of natural language processing (NLP) and information retrieval. Its purpose is to extract latent topics from a given corpus of text, facilitating the comprehension of underlying themes and structure within the textual data. This, in turn, enables efficient organization and analysis of the information. While traditional algorithms like Latent Dirichlet Allocation (LDA) (Blei et al., 2003) have been extensively utilized, they face several challenges that can hinder their effectiveness. Such challenges include dealing with noisy data, topic overlapping, and poor interpretability. In response to these limitations, BERTopic (Grootendorst, 2022) has emerged as a promising alternative. BERTopic is a recently developed sophisticated topic modelling algorithm that is based on the Bidirectional Encoder Representations from Transformers (BERT) architecture (Devlin et al., 2019). In this paper, the abstracts of the selected papers in this study underwent qualitative analysis using BERTopic. BERTopic is renowned for its capability to generate coherent topics and maintain competitiveness across various benchmark evaluations. It outperforms both classical models such as LDA and Non-Negative Matrix Factorization (NMF) (Fé et al., 2011/09) as well as more recent clustering-based approaches to topic modelling, such as CTM (Bianchi et al., 2021) and Top2Vec (Angelov, 2020).

Previous research has convincingly demonstrated the efficacy of BERTopic in discerning dimensions and prominent keywords conveyed in online reviews (Atzeni et al., 2022; Raju et al., 2022, pp. 1–6). Moreover, it has proven invaluable in extrapolating research patterns within the realm of literature analysis (Fan et al., 2023).

In line with previous literature, BERTopic was used to analyse the words contained in abstracts and to generate a list of interpretable topics from the previous literature. Specifically, BERTopic leverages a three-step process to generate topic representations. Initially, each document is transformed into an embedding representation using a pre-trained language model. Subsequently, the dimensionality of the resulting embeddings is reduced to enhance the clustering process prior to clustering them. Finally, topic representations are extracted from the document clusters using a customized class-based variation of TF-IDF (Bafna et al., 2016, pp. 61–66). These three independent steps facilitate a flexible topic model that can be effectively employed in a range of applications, including dynamic topic modelling.

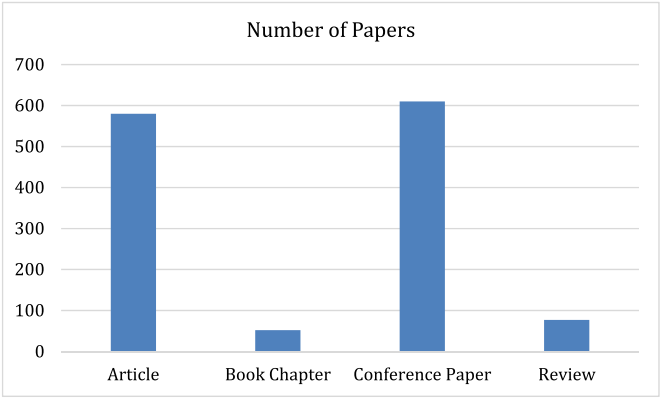


Fig. 2. Distribution of GAI research articles by 'type'.

3.1. Preparing text for analysis

The first stage entails pre-processing the text data from the abstracts. This is an essential phase as it significantly affects the quality of the topic models generated. The steps involved in this stage include: lowercasing; tokenization; lemmatization - reducing words to their base or dictionary form and stitching tokens - concatenating the lemmatized tokens back into cleaned text.

3.2. Document embeddings

In this stage, as shown in Fig. 3, embeddings are generated for each document (abstract) using BERT. These embeddings capture contextual information and semantics within the text. BERTopic uses Sentence Transformers for this step. We used the default embedding model in BERTopic: all-MiniLM-L6-v2 ("Pretrained Models), which maps sentences & paragraphs to a 384-dimensional dense vector space and can be used for tasks like clustering or semantic search.

3.3. Document clustering

After obtaining the document embeddings, the application of

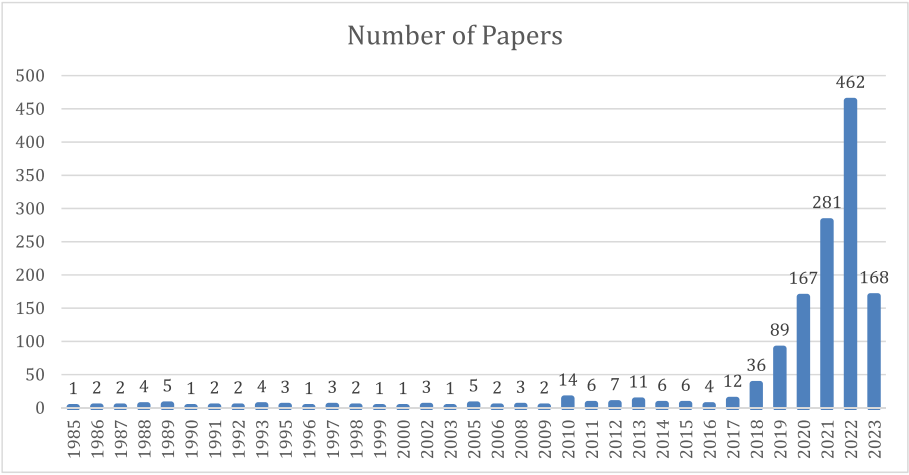


Fig. 1. Distribution of GAI research articles across years.

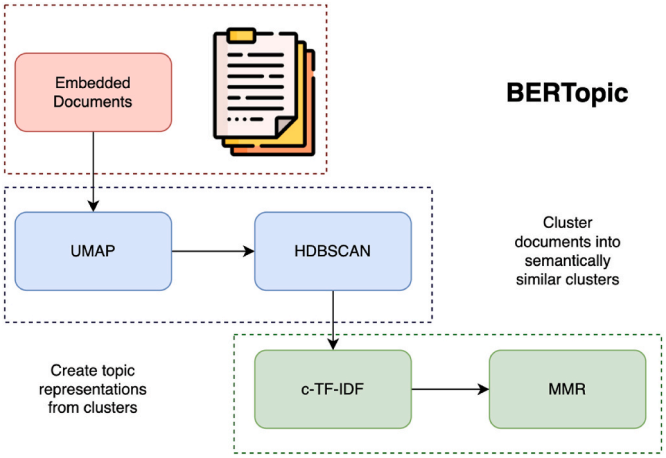


Fig. 3. Illustration of BERTopic.

clustering algorithms becomes crucial in order to group the documents into clusters, with each cluster representing a distinct topic. However, in high-dimensional data, the "curse of dimensionality" blurs spatial locality and equates distances between nearest and farthest points, diminishing the effectiveness of different distance measures. Strategies to counter this include specific clustering techniques or reducing the dimensionality of embeddings.

While Principal Component Analysis (PCA) (Jolliffe & Cadima, 2016) and t-Distributed Stochastic Neighbor Embedding (t-SNE) (Maaten & Hinton, 2008) are widely recognized techniques for dimensionality reduction, an alternative method called Uniform Manifold Approximation and Projection (UMAP) (McInnes et al., 2020) has been shown to retain more of the local and global features of high-dimensional data when projecting it onto lower dimensions. One advantage of UMAP is its ability to be applied across language models with varying dimensional spaces, as it does not impose computational restrictions on embedding dimensions. Hence, we employ UMAP to decrease the dimensionality of the document embeddings generated in Stage 2.

For clustering the reduced embeddings, BERTopic utilizes a modified version of Hierarchical Density-Based Spatial Clustering of Applications with Noise (HDBSCAN) (McInnes et al., 2017). This approach extends the capabilities of DBSCAN (Ester et al., 1996) by identifying clusters of different densities through a hierarchical clustering algorithm. It utilizes soft-clustering to differentiate noise as outliers, improving topic representation by preventing misclassification of unrelated documents into clusters.

3.4. Topic representation

The final step involves generating topic representations. For each cluster generated in the previous step, BERTopic calculates the c-TF-IDF (Class-based Term Frequency-Inverse Document Frequency) score for each term within the cluster. The terms with the highest c-TF-IDF scores are considered the most representative of their respective topics. Here, we used the built-in reduce_frequent_words function of BERTopic to reduce frequent words in the c-TF-IDF representation. Essentially, this means that the algorithm will put less emphasis on words that appear very frequently across documents.

For a term **x** within class **c**:

$$W_{x,c} = \left\| tf_{x,c} \right\| \times \log\left(1 + \frac{A}{f_x}\right)$$

where.

$tf_{x,c}$ = frequency of word **x** in class **c**

f_x = frequency of word **x** across all classes

A = average number of words per class

4. Result

4.1. Determining the number of topics

After implementing and training the BERTopic model on the dataset, we successfully derived 23 topics as elucidated herein. Figure 4, as depicted, illustrates that BERTopic efficiently extracts a set of lexemes representative of each topic. These lexemes, often termed 'topic words', play a vital role in encapsulating the principal themes or concepts within the corpus associated with a specific topic. BERTopic assigns scores to these topic words, which epitomize the relative significance of individual words concerning a given topic. These scores are computed employing sophisticated algorithms that account for the context and distribution of words within the corpus. Words that manifest in close proximity and contribute substantively to the semantic essence of a topic tend to receive elevated scores. Conversely, words deemed less pertinent or contributing marginally to the semantic representation of the topic are accorded lower scores.

To further refine the model and optimize the number of topics, we generated an intertropic distance map as shown in Fig. 5. This graphical representation delineates the relationships among topics in a two-dimensional space. The map facilitates insights into the proximal relations and hierarchical structure of topics, thereby advancing a more profound understanding of the topic configuration within the dataset.

The intertropic distance map unveiled intriguing patterns and intricate relationships among the topics generated through the BERTopic model. Our observations can be categorized into three domains:

4.2. Topic proximity

A critical observation is a proximal relation between topics situated in close vicinity on the intertopic distance map. This proximity is indicative of a higher degree of similarity concerning the underlying content and themes. Such close-knit topics are suggestive of them encompassing interrelated concepts and themes. To illustrate, a topic characterized by lexemes such as "image, imaging, medical, ct, segmentation, patient, clinical, wa, were, disease" and another with lexemes like "ecg, medical, disorder, healthcare, patient, medicine, health, covid19, pdodd, disease" were observed to be in close proximity, which intimates their interconnectedness within the medical domain.

4.3. Topic hierarchy

The intertopic distance map also conferred insights into the hierarchical taxonomy of topics. Clusters of topics, forming cohesive subgroups, were observed, representing discrete subdomains or research areas. This hierarchical construct enables the discernment of overarching themes and subsidiary topics within the academic corpus. For instance, a conspicuous cluster was identified revolving around "Medical imaging & diagnostics", whereas another cluster centered on "Emerging use cases - drug discovery, fault diagnosis in mechanical systems, finance", which signifies the presence of distinct research subdomains within the broader academic sphere.

4.4. Outlier topics

Apart from recognizing clusters, the intertopic distance map was instrumental in detecting outlier topics, which are situated at a considerable distance from the main clusters. Outlier topics are indicative of discrete or niche research domains that do not conform to the prevalent themes in the dataset. As shown in Fig. 5, all topics fall within the prevalent themes and no outlier topics are identified.

Upon conducting a comprehensive evaluation incorporating the

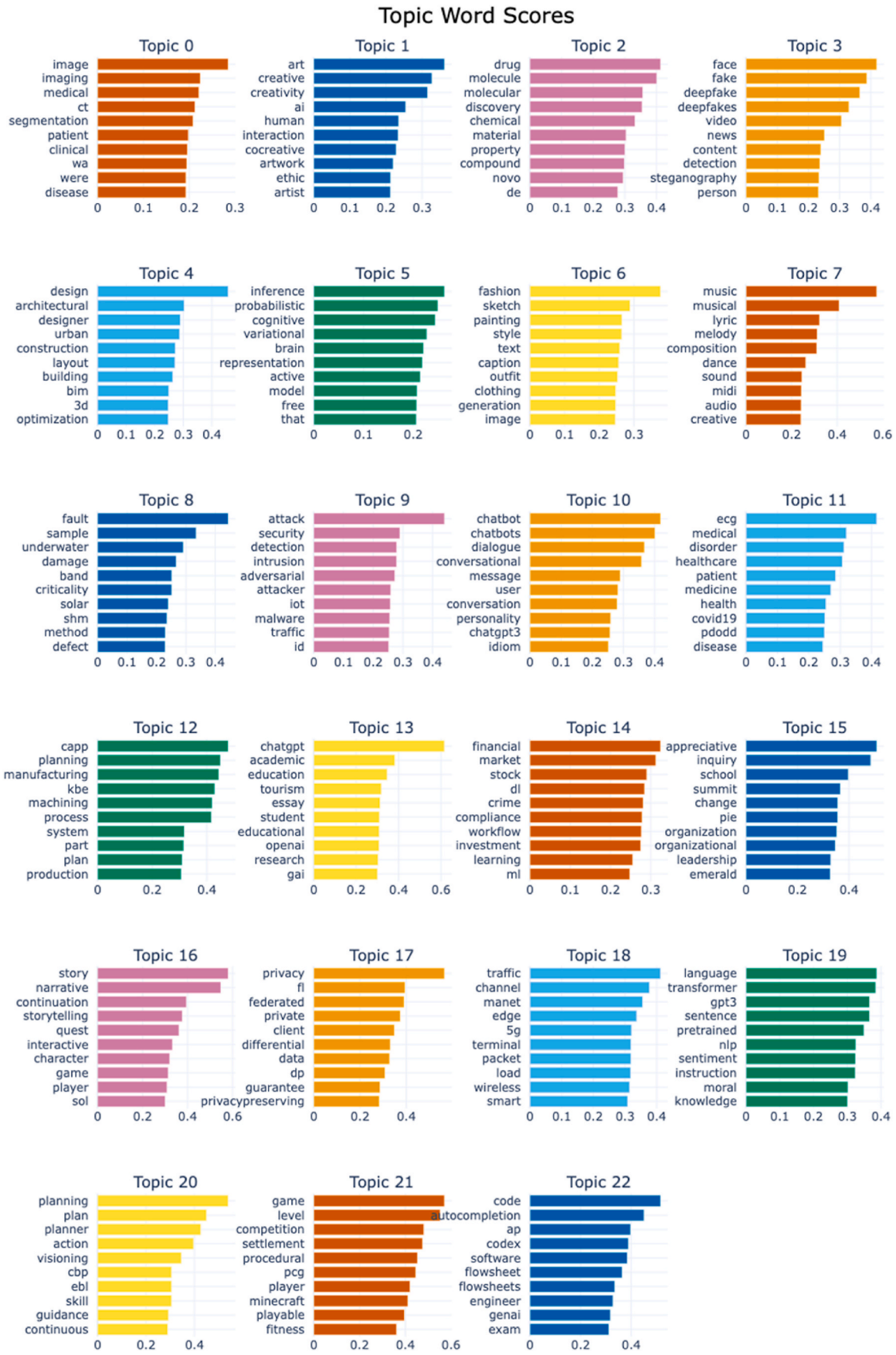


Fig. 4. The illustration of the topic words for the 23 topics derived by BERTopic.

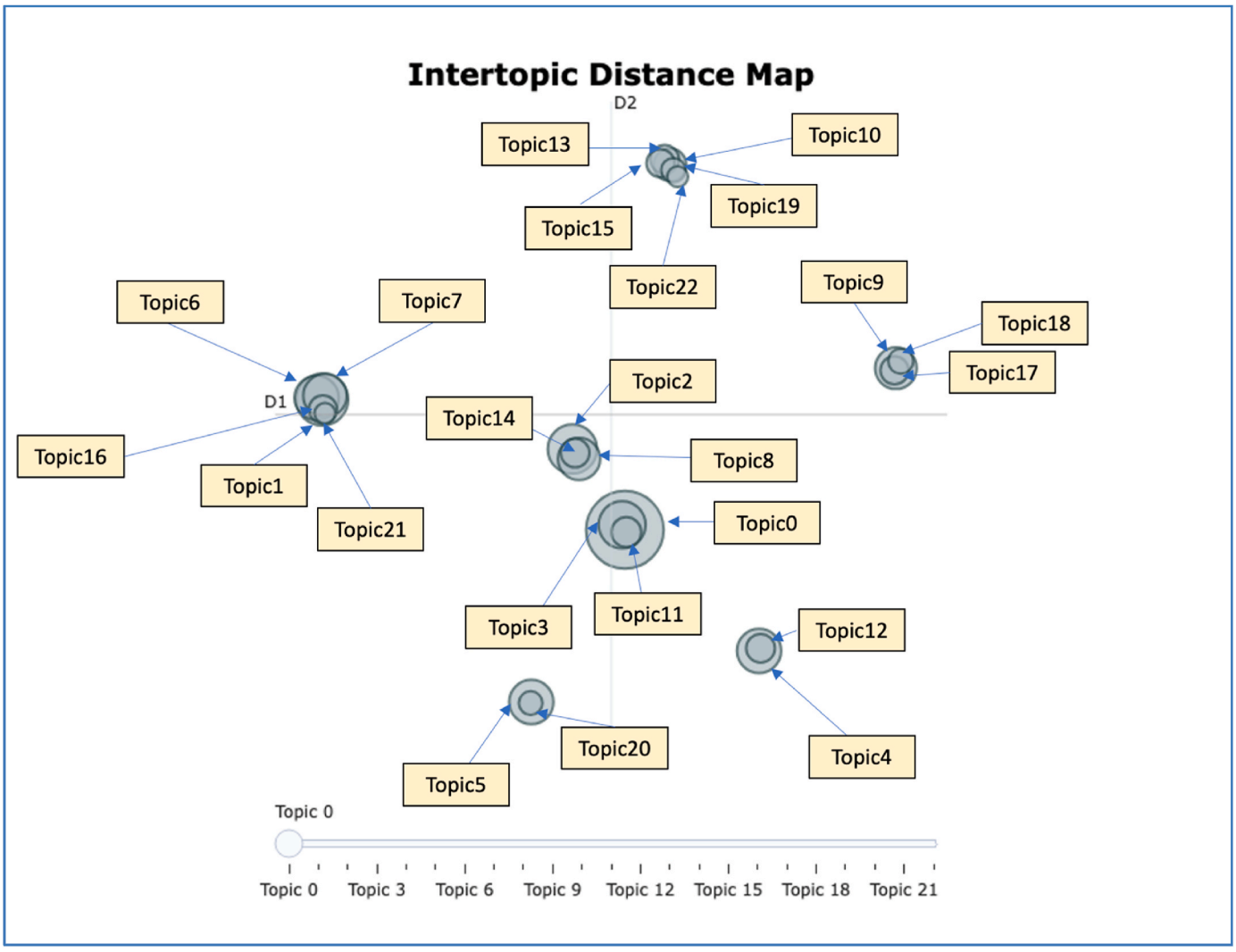


Fig. 5. Intertopic Distance Map for the 23 topics derived by BERTopic.

above dimensions, we deduced seven distinct clusters of topics, which are meticulously tabulated in Table 1. These clusters epitomize the culmination of an intricate and methodical analysis of topics derived through the BERTopic model and are instrumental in understanding the intellectual landscape of the academic corpus.

Drawing upon the DLM framework (Sharma et al., 2016, 2018), we classify the topics covering the utilization of GAI models across various domains (Cluster 1 to Cluster 5) as Innovationative GAI applications, Cognitive inference & planning (Cluster 6) as Infrastructure and Techniques, and Data privacy & security (Cluster 7) as the Governance components of the framework, respectively. The initial cluster, comprising Topics 0, 3, and 11, encompasses prevalent keywords such as "Image," "segmentation," "medical," "CT," and "healthcare." These terms denote the predominant thematic content related to image processing, specifically emphasizing broader applications within the healthcare domain. Cluster 2 comprises 5 different but related topics with each topic covering the application of GAI in content generation in a specific area such as art, fashion, music, story and game. Based on Fig. 5, it is observed that Cluster 3 has a close proximity with Cluster 1 as both clusters share some common applications of GAI in the medical domain, as represented by the keywords such as "drug", "molecule", "discovery" in topic 2 of Cluster 3. In addition, Cluster 3 also includes the emerging use cases of GAI in other areas such as fault diagnosis in the mechanical systems and the financial markets. Cluster 4 and Cluster 5 cover topics relating to the application of GAI in the broad Engineering and Education setting, respectively. For the Engineering applications, the keywords of "design", "architectural", "construction", "planning" and "manufacturing" indicates that GAI is able to assist in the various stages of the engineering and manufacturing process. As for the Education applications, GAI has a wide range of applications such as chatbots, personalized services, language transformer, and system automation. These five clusters show the distinct areas of applications of GAI in various domains, and the proximity of topics under each cluster is very high which indicates the interconnection within the cluster. On the other hand, Cluster 6 and Cluster 7 are different from the first five clusters as they represent topics that review GAI from two distinct angles: the Infrastructure and Techniques as well as the Governance of GAI. Cluster 6 covers topics 5 and 20 with keywords such as "inference", "cognitive", "planning", "model", indicating a focus on the techniques of GAI in the process of cognitive inference and planning. Cluster 7 comprises three closely related topics including security, data privacy and traffic channel. The three topics have close proximity and a high level of interconnectedness within this cluster as shown in Fig. 5.

5. Discussion

Drawing upon the DLM framework (Sharma et al., 2016, 2018), we classify the topics covering the utilization of GAI models across various domains as Innovation, Cognitive inference & planning as Infrastructure and Techniques, and Data privacy & security as the Governance

Table 1
Summary of the clusters of topics.

Topic No	Count	Name	Representation	Cluster head	DLM Framework
0	182	0_image_imaging_medical_ct	image, imaging, medical, ct, segmentation, patient, clinical, wa, were, disease	Image Processing and Content Analysis	Innovative GAI applications
3	67	3_face_fake_deepfake_deepfakes	face, fake, deepfake, deepfakes, video, news, content, detection, steganography, person		
11	27	11_ecg_medical_disorder_healthcare	ecg, medical, disorder, healthcare, patient, medicine, health, covid19, pdodd, disease		
1	81	1_art_creative_creativity_ai	art, creative, creativity, ai, human, interaction, co-creative, artwork, ethic, artist	Content generation	Innovative GAI applications
6	59	6_fashion_sketch_painting_style	fashion, sketch, painting, style, text, caption, outfit, clothing, generation, image		
7	57	7_music_musical_lyric_melody	music, musical, lyric, melody, composition, dance, sound, midi, audio, creative		
16	24	16_story_narrative_continuation_storytelling	story, narrative, continuation, storytelling, quest, interactive, character, game, player, sol		
21	13	21_game_level_competition_settlement	game, level, competition, settlement, procedural, pcg, player, minecraft, playable, fitness		
2	73	2_drug_molecule_molecular_discovery	drug, molecule, molecular, discovery, chemical, material, property, compound, novo, de	Emerging use cases- drug discovery, fault diagnosis in mechanical systems, finance	Innovative GAI applications
8	54	8_fault_sample_underwater_damage	fault, sample, underwater, damage, band, criticality, solar, shm, method, defect		
14	25	14_financial_market_stock_dl	financial, market, stock, dl, crime, compliance, workflow, investment, learning, ml		
4	59	4_design_architectural_designer_urban	design, architectural, designer, urban, construction, layout, building, bim, 3d, optimization	Engineering	Innovative GAI applications
12	25	12_capp_planning_manufacturing_kbe	capp, planning, manufacturing, kbe, machining, process, system, part, plan, production		
10	32	10_chatbot_chatbots_dialogue_conversational	chatbot, chatbots, dialogue, conversational, message, user, conversation, personality, chatgpt3, idiom	GPT applications with more focus on academic use cases	Innovative GAI applications
13	25	13_chatgpt_academic_education_tourism	chatgpt, academic, education, tourism, essay, student, educational, openai, research, gai		
15	24	15_appreciative_inquiry_school_summit	appreciative, inquiry, school, summit, change, pie, organization, organizational, leadership, emerald		
19	18	19_language_transformer_gpt3_sentence	language, transformer, gpt3, sentence, pretrained, nlp, sentiment, instruction, moral, knowledge		
22	13	22_code_autocompletion_ap_codex	code, autocompletion, ap, codex, software, flowsheet, flowsheets, engineer, genai, exam		
5	59	5_inference_probabilistic_cognitive_variational	inference, probabilistic, cognitive, variational, brain, representative, active, model, free, that	Cognitive inference & planning	Infrastructure and Techniques
20	17	20_planning_plan_planner_action	planning, plan, planner, action, visioning, cbp, ebl, skill, guidance, continuous		
9	52	9_attack_security_detection_intrusion	attack, security, detection, intrusion, adversarial, attacker, iot, malware, traffic, id	Data privacy & security	Governance
17	24	17_privacy_fl_federated_private	privacy, fl, federated, private, client, differential, data, dp, guarantee, privacy preserving		
18	19	18_traffic_channel_manet_edge	traffic, channel, manet, edge, 5g, terminal, packet, load, wireless, smart		

components of the framework, respectively. Following the grouping of seven clusters of the 23 topics identified in Section 4, next, we will provide a more detailed discussion on each of the clusters.

5.1. Innovative application cases

5.1.1. Image processing and content analysis

GAI has diverse applications in image and content analysis, encompassing face analysis, fake detection, deepfakes, video analysis, news verification, content detection, steganography, and person identification (Kavazi et al., 2021). By leveraging such techniques, industries can enhance security, authenticity, and accuracy in analyzing and verifying visual content, ensuring the integrity of information, and enabling effective decision-making (Dwivedi et al., 2023/08).

In the area of face analysis, GAI algorithms enable accurate face detection, recognition, and analysis (Romdhani et al., 2002). These algorithms can identify facial features, emotions, and biometric characteristics, supporting applications such as facial recognition systems, emotion detection, and identity verification (Andrews et al., 2023). It can assist in person identification tasks, such as identifying individuals in images or videos and linking them across different sources. These models leverage facial recognition and similarity matching techniques to establish person identities, supporting applications such as law enforcement, surveillance, and social media analysis (Solaiman, 2023).

In the area of fake detection, GAI plays a crucial role in detecting and identifying fake or manipulated content, including images, videos, and news articles (Dalalah & Dalalah, 2023). By leveraging deep learning techniques, it can analyse visual and textual cues to identify signs of manipulation or falsification, helping to combat the spread of misinformation. For example, GAI is extensively used in the detection and mitigation of deepfake content (Mirsky & Lee, 2021). Deepfakes refer to AI-generated media, particularly videos that convincingly alter the appearance or actions of individuals (Khoo et al., 2022). GAI models are developed to detect and identify manipulated content, aiding in the fight against deceptive or malicious usage. In addition, GAI models are employed in the verification and fact-checking of news content (Leiser, 2022). By analyzing the textual and contextual features of news articles, GAI algorithms can assess the credibility and authenticity of information, helping to identify fake news or misleading content. Furthermore, GAI also plays a role in detecting and analyzing hidden or encrypted content within media. This includes steganography detection, where hidden information or patterns within images, videos, or audio, aiding in security and forensic investigations are identified by GAI models (Neupane et al., 2023).

With its capabilities in image procession and content analysis, GAI has emerged as a powerful tool in various medical-related fields, with applications encompassing medical imaging, patient care, clinical decision-making, healthcare optimization, and disease prediction (Sallam, 2023). By leveraging GAI, healthcare professionals and researchers can improve diagnosis accuracy, optimize healthcare systems, enhance patient care, develop effective treatments, and respond more effectively to public health challenges (Javaid et al., 2023).

GAI techniques are applied to various medical imaging modalities, such as CT scans, MRI scans, and X-rays, to enhance image quality, improve resolution, denoise images, and synthesize new images (Osuala et al., 2023). These advancements in medical imaging enable more accurate diagnoses, treatment planning, and research. GAI plays a pivotal role in disease detection and diagnosis by analyzing medical images, patient data, and clinical information. By leveraging deep learning techniques, GAI assists in automated disease classification, anomaly detection, and prediction, leading to early detection, accurate diagnoses, and timely intervention (Lang et al., 2023). GAI models leverage patient data, clinical records, and historical information to support personalized patient care and clinical decision-making (Jungwirth & Haluza, 2023). These models help healthcare professionals predict disease progression, treatment outcomes, and patient prognosis, enabling tailored interventions and optimizing healthcare delivery.

5.1.2. Content generation

GAI has transformed content generation in the realms of art, music, storytelling, game development, and fashion. From generating stunning visual artwork and composing original music to crafting interactive narratives, procedurally generating game content, and creating unique fashion designs, GAI provides new avenues for creativity and opens up possibilities for innovation in various creative industries (Epstein et al., 2023).

Using GAI algorithms, original and visually appealing artwork has been produced. One notable example is the "DeepDream" algorithm developed by Google (Fjeld & Kortz, 2017). It utilizes deep neural networks to transform images into surreal and dream-like compositions by enhancing and emphasizing patterns and structures. Artists and enthusiasts have used this algorithm to generate intriguing and imaginative visual artworks (Maerten & Soydaner, 2023). Another example is the use of generative adversarial networks (GANs) in art generation. GANs consist of a generator network and a discriminator network that compete against each other (Ali et al., 2021). GANs have been employed to create original artworks, such as the "Portrait of Edmond de Belamy" by Obvious (Epstein et al., 2020). This artwork, created using GANs, became the first AI-generated artwork to be sold at an auction.

GAI models have made it easier to create innovative musical compositions. For example, OpenAI's "MuseNet" employs deep learning techniques to generate diverse musical pieces in various styles and genres (Dasgupta et al.). By training on a vast amount of music data, MuseNet can compose melodies, harmonies, and even full musical arrangements. This technology offers musicians and composers new sources of inspiration and creative possibilities. Jukedeck is another notable platform that leverages GAI for music composition which uses AI algorithms to compose royalty-free music for videos, games, and other creative projects (Fjeld & Kortz, 2017). By specifying desired parameters like mood, genre, and duration, users can generate custom music tailored to their specific needs.

GAI has also been used to create stories and narratives. OpenAI's "ChatGPT" is a language model that can generate conversational text that has been utilized to create interactive storytelling experiences where users can engage in dialogue with AI-generated characters and immerse themselves in dynamic narratives (Dwivedi et al., 2023/08). Another example is "Botnik Studios," which uses AI to generate creative content such as stories, poems, and song lyrics. By training on vast corpora of text data, AI models can generate text that mimics the style and tone of different authors or genres, leading to unique and often humorous content (Kaplan & Haenlein, 2019).

GAI techniques have found applications in game development to automatically generate game content. "No Man's Sky" is a prime example of a game that utilizes procedural generation. It employs generative algorithms to create a vast, procedurally generated universe with unique planets, creatures, and landscapes (Reinhard, 2021). This approach allows for virtually limitless exploration and surprises for players. Similarly, the game "Spelunky" utilizes procedural generation to create dynamic and challenging levels. Each playthrough generates new layouts, items, and enemies, enhancing replayability and ensuring a fresh experience with every game session (Mawhorter & Mateas, 2010).

GAI has made its way into fashion design, enabling the generation of unique designs, patterns, and garments. IBM's "Cognitive Dress" is a remarkable example of AI's influence in the fashion industry (Khabiri et al., 2019). Developed in collaboration with Marchesa, the dress incorporated generative elements into its design (Faedda, 2021). AI algorithms analyzed real-time social media data during the 2016 Met Gala to generate a design that incorporated patterns and colors inspired by the event (Khan, 2017). GAI can also be used to generate fashion designs and patterns. By training on a vast dataset of fashion images, AI models can generate new and innovative designs, aiding designers in the creative process and expanding their repertoire of ideas.

5.1.3. Architecture, construction and engineering (AEC)

"Current developments in AI bring new opportunities for creating innovative digital AEC tools- Computer-Aided Design (CAD), Building Information Modeling (BIM) and Geographic Information Systems (GIS) for professional architects, urban planners, and engineers that automatically generate architecture and cities" (Stojanovski et al., 2021). Wrigley et al. (Wrigley et al., 2019) explores the potential of accelerating the design process for nuclear power plants by employing Automated Design (AD) techniques within the realms of AI. Cao et al. (Bin et al., 2012) employ an image-based GAN to estimate the sky view factor (SVF) in a residential environment. They construct a deep learning network that effectively segments the sky areas from 360-degree camera images. In the realm of intelligent generation of building plans, certain scholars utilize a specific GAN model known as pix2pix. This model aids in identifying the planes of residential buildings. Zandavali and Jimenez Garcia (Lu et al., 2016) use a GAN to generate tiling patterns for arbitrary boundaries. Goodfellow et al. (Goodfellow et al., 2020) redefine the role of AI, shifting it from being purely an analytical tool to a generative agent, thereby advancing its involvement in architectural aspects like drawing and image production. The study investigates how Knowledge Based Engineering (KBE) and Generative Design, branches of AI, can contribute to this endeavour. KBE has found application across diverse industries including automotive, aerospace, chemical process plants, oil and gas, as well as ship and submarine design. Zhao et al. (Zhao et al., 2021) use the GAN for layout planning of the operating and emergency departments (ODs) of general hospitals. This technique not only releases the heavy load of architects in the early design stage but also advances the field of medical architecture. However, for an AI-based industrial solution to be of practical value in any AEC domain, the importance of domain knowledge and target audience cannot be over-emphasized (Cristianini & Shawe-Taylor, 2000).

5.1.4. GPT applications

The industrial demand for text mining and NLP has surged, leading to the development and advancement of algorithms such as BERT, Long short-term memory, and language models. These algorithms have gained significant importance in the field of industrial automation (Kushwaha & Kar, 2021). OpenAI's ChatGPT combines deep learning and language models within the GPT architecture, resulting in a substantial enhancement of chatbot capabilities. The term "pre-training" refers to the initial training phase on a large text corpus, which provides a strong foundation for the model to perform effectively on specific tasks even with limited task-specific data available. The transformer-based architecture consists of a series of transformer blocks that process input text and generate output text (Dwivedi et al., 2023b). There is a plethora of GPT applications that have come up, for example, Microsoft's BioGPT, ChatSonic, JasperAI, You.com, and ShortlyAI.

The widespread global adoption of ChatGPT (GPT-3.5 architecture) has showcased its versatility across various applications, including software development and testing, poetry, essays, business letters, and contracts (Tung, 2023). However, the extensive use of ChatGPT for tasks such as text generation, language translation, and answering questions has raised concerns within academic and educational communities. Differentiating between human and AI authorship has become challenging, sparking debates about the role of traditional human efforts. While there are instances of ChatGPT-co-authored academic articles and editorials (Kung et al., 2023), this practice remains highly controversial and is prohibited by many journals. Nevertheless, with proper permissions and acknowledgment, ChatGPT and similar LLMs could potentially assist researchers by reducing their workload in research planning, execution, and presentation (Xames & Shefa, 2023).

Although ChatGPT poses a significant challenge to the credibility of short-form essays as an assessment method, it can also be viewed as an opportunity to leverage its capabilities as a writing assistant. Many papers such as Kasneci et al. (Kasneci et al., 2023) have explored the potential benefits of utilizing ChatGPT to enhance students' learning experiences and support teachers' work. These studies have found that ChatGPT's writing is informative, accurate, and systematic. They propose the design of AI-involved learning tasks that engage students in solving real-world problems, thereby equipping them with valuable skills for AI-driven workplaces. By incorporating ChatGPT into educational settings, students can develop the necessary competencies for utilizing AI effectively.

The impact of chatbots on higher education, learning, teaching, and assessment is a subject of intense debate. Notably, ChatGPT-4 has demonstrated remarkable performance by passing graduate-level exams in various disciplines such as law, medicine, and business. For instance, Katz et al. (Katz et al., 2023) discovered that GPT-4 achieved scores exceeding the passing thresholds of all UBE (U.S. Bar Exam) jurisdictions, surpassing the educational requirements of human candidates who typically spend seven years in post-secondary education, including three years in law school. Similarly, Malinka et al. (Malinka et al., 2023) tested ChatGPT's capabilities in representative exams, term papers, and programming tasks and concluded that it has the potential to "meet the requirements of university degree courses" in IT security at a Czech university. Notably, there is a growing body of research focusing on the performance of GPT-4, surpassing its predecessor's capabilities in test-taking. Integrating GAI tools into the classroom and teaching students how to utilize them constructively and responsibly will equip them with the skills needed to thrive in an AI-dominated work environment. By preparing students to effectively engage with these tools, they can harness their potential while ensuring safe and responsible usage.

5.1.5. Other emerging use cases

Recent advances and accomplishments of AI and deep generative models have established their usefulness in a variety of domains ranging from as far as medicinal chemistry, especially in drug discovery and development compliance and stock assessment in financial markets to fault diagnosis in mechanical systems.

Molecular drug discovery *"In the long-term struggle between humans and diseases, especially the recent pandemic of coronavirus disease 2019 (COVID-19), drugs are playing an increasingly significant role. However, the drug discovery process has been confronted with obstacles, which requires a great deal of manpower, material, and financial resource."* (Cheng et al., 2021). On average, the drug development cycle, spanning from preclinical target screening to final marketing, requires a minimum of 13.5 years (Paul et al., 2010). Developing a new drug for a pharmaceutical company is an expensive journey, costing approximately 1.8 billion dollars, with a notable failure rate (O'Malley, 2006). In recent times, numerous deep generative models have been dedicated to enhancing de novo molecular design, aiming to address these challenges.

While these models exhibit significant variations in methodology, they can be classified into four common architectures/approaches: (1) Language models (Segler et al., 2018) rely on a chemical language, such as SMILES (e.g., SMILES (Weininger, 1988)) to represent molecular structures. These models learn the probability of a symbol in a sequence based on previously observed symbols; (2) Autoencoders (Gómez-Bombarelli et al., 2018) employ encoder and decoder networks to map molecules into a fixed-size latent space; (3) GANs (Mé et al., 2020) consist of generator and discriminator neural networks, which transform random noise into a distribution that closely resembles real data; and (4) Pure reinforcement learning (Stå et al., 2019) employs neural networks to learn the appropriate actions to take, following a given set of molecule-building rules.

The training of GAI models heavily relies on extensive datasets, highlighting the growing importance of constructing more comprehensive datasets in the field of molecular generation. Furthermore, many of the existing models for molecular generation draw inspiration from established methods in computer vision and natural language processing. However, there is a need for future exploration in designing novel models and suitable representations specifically tailored to molecular theory.

Fault diagnosis Mechanical system health monitoring holds great significance in modern industry. In recent times, there has been a significant focus on fault classification using AI models (Lou et al., 2022). Various approaches, such as deep convolution neural networks (Guo et al., 2016), extreme learning machine (ELM) (Huang et al., 2014), support vector machine (SVM) (Cristianini & Shawe-Taylor, 2000), artificial neural networks (ANNs), decision tree, etc., have garnered attention. More specifically, Bin et al. (Bin et al., 2012) devised a hybrid feature extraction method to enhance the early fault classification capability of ANNs. Lu et al. (Lu et al., 2016) proposed a probabilistic weighted least square SVM approach for controlling hydraulic actuators amidst noisy operation conditions. Liu et al. (Liu et al., 2018) introduced a data fusion-based fault diagnosis method to accurately and swiftly detect faults. Yang et al. (Yang et al., 2018) presented a dual ELM solution to address the issue of identifying unseen single or simultaneous faults in multistage gearbox systems. Rabcan et al. (Rabcan et al., 2019) developed a fuzzy classifier specifically for identifying defects in aircraft engine gas turbine blades. These examples demonstrate the establishment of AI models as powerful tools for fault classification in mechanical systems.

Finance As rightly put by (Ś et al., 2021),"*New AI algorithms are constantly emerging, with each 'strain' mimicking a new form of human learning, reasoning, knowledge, and decision-making.*" The availability of data, computing power, and infrastructure has made Deep Learning, Adversarial Learning, Transfer Learning, and Meta-Learning more relevant and applicable than ever before. These learning approaches have given rise to new models and facilitated significant advancements in various domains such as Natural Language Processing, Adversarial Examples, Deep Fakes, and more, thereby driving transformative changes in financial markets. Artificial intelligence algorithms are being increasingly used in finance for NLP and sentiment analysis (Kolchyna et al., 2015), portfolio optimization (Heaton et al., 2017), fraud detection (Adewumi & Akinyelu, 2017), compliance/regulation (Van Liebergen, 2017), systematic trading (De Prado, 2018), reporting and actuarial modelling (Richman, 2018) and risk management (Aziz & Dowling, 2019). As AI algorithms possess the ability to self-program and dynamically evolve, financial institutions and regulators are placing growing emphasis on ensuring a level of human control. This entails focusing on algorithmic interpretability, robustness, and compliance with legal frameworks.

5.2. Infrastructure and Techniques - Cognitive Inference & Planning

GAI techniques in Cognitive Inference & Planning, encompassing probabilistic inference, cognitive modeling, planning and decision-making, active visioning, and skill acquisition (Beheshti et al., 2023) pave the way for understanding and replicating human-like cognitive abilities and enabling intelligent decision-making in complex environments.

GAI models utilize probabilistic reasoning to infer hidden variables and make predictions (De Silva et al., 2020). These models excel at modeling uncertainty and generating probabilistic distributions, thus enabling robust reasoning under uncertain conditions. Variational inference, a widely employed technique in GAI, allows for the approximation of intricate probabilistic models and facilitates efficient inference (Tang et al., 2021).

In the field of cognitive modeling, GAI plays a significant role in capturing the underlying mechanisms and processes that drive human cognition (Sobhanmanesh et al., 2023). Models such as cognitive architectures strive to simulate human-like cognitive abilities encompassing perception, memory, attention, and decision-making. By generating representations of cognitive states and behaviors, these models facilitate the comprehension and prediction of human cognition. Through the generation of intricate representations that encapsulate cognitive processes and the interactions between the brain and the environment, generative models have the potential to simulate and elucidate complex cognitive phenomena. As a result, GAI contributes to the advancement of cognitive neuroscience and cognitive robotics, enhancing our understanding of the intricate workings of the human mind (Eshraghian, 2020/03).

GAI plays a pivotal role in enabling planning and decision-making in complex environments. Planning entails generating sequences of actions aimed at achieving specific goals or solving problems. Generative planners can explore various action sequences, assess their potential outcomes, and ultimately select the most optimal plan (Borrajo & Veloso, 1997). These planners can be guided by cognitive principles, incorporating human-like reasoning and preferences. Notably, GAI facilitates continuous planning, wherein plans are dynamically adjusted and adapted as new information becomes available. This approach involves generating plans that can effectively handle changing environments and uncertain conditions (Kaplan & Haenlein, 2019). By generating adaptable plans that respond to new observations, generative models ensure flexibility and robustness in decision-making.

Furthermore, GAI techniques support active visioning, whereby an agent actively controls and directs its visual attention to gather information efficiently. Generative models are capable of generating hypotheses about visual scenes and leveraging them to guide attention and perception (Parr et al., 2021). This empowers agents with the ability to gather relevant information, perform object recognition, and attain a comprehensive understanding of the scene.

In the realm of skill acquisition, GAI proves invaluable by generating representative examples and providing guidance during the learning process. By capturing the distribution of potential skills and actions, generative models can generate training data that aid agents in acquiring new skills through reinforcement learning or other learning paradigms. Additionally, generative models can offer valuable guidance and feedback to learners, thereby facilitating and accelerating the development of new skills.

Overall, GAI contributes to planning and decision-making through continuous planning, supports active visioning by guiding attention and perception, and assists in skill acquisition by generating representative examples and providing guidance. These applications highlight the versatility and potential impact of GAI in various domains, including robotics, autonomous systems, and artificial intelligence.

5.3. Governance - data privacy and security

"*With the advent of the big data era, data is wealth*" (Qu et al., 2022). The scenario of data isolation poses unprecedented challenges for the development of machine learning (ML) algorithms. To address the difficulties associated with data privacy preservation in the ML context, various solutions have been proposed, utilizing concepts such as Homomorphic Cryptography (HC) (Bost et al., 2014), Secure Multi-Party Computation (SMPC) (Mohassel & Rindal, 2018), and Differential Privacy (DP) (Iyengar et al., 2019). A significant concern in machine learning pertains to the presence of privacy-sensitive information within training data, such as human faces and medical records. This raises the risk of potential data leakage through the trained machine-learning models (Zhang et al., 2020). Preserving the privacy of such sensitive information while maintaining high learning utility for datasets has become a focal point of interest. Consequently, data privacy protection and security have emerged as global trends, leading to the enactment of a series of laws and regulations that make obtaining data more challenging (Yang et al., 2019). From an industrial perspective, data often exists in the form of isolated islands due to factors such as industry competition, privacy security concerns, complex administrative procedures, and related challenges. Even within the same company, achieving centralized data integration between different departments encounters numerous obstacles in terms of achieving data interconnectivity. In reality, integrating data that is scattered across various locations and institutions is an incredibly challenging task, entailing substantial costs.

A considerable amount of recent research has focused on implementing federated learning (FL) algorithms to facilitate the creation of effective ML models. FL, also known as federated ML, joint learning, or alliance learning, is an ML framework that enables multiple organizations to collaborate on data utilization and model training while adhering to requirements for user privacy protection, data security, and government regulations.

The concept of FL was initially introduced by Google in 2016 as a solution to update models locally on Android mobile devices (Konečn et al., 2016). Its primary objective is to ensure secure information exchange, protect terminal data and personal data privacy, and facilitate efficient ML collaboration among multiple participants or computing nodes while complying with legal requirements. This particular scenario is known as horizontal FL. Apart from horizontal FL, there are two other approaches for different types of data samples: vertical FL and federated transfer learning. The advent of FL presents new possibilities for AI to overcome data barriers and advance further. While current research focuses on addressing heterogeneity issues (Li et al., 2019), and core FL optimizations to minimize communication overhead (Liu et al., 2020), FL still faces three significant challenges. Firstly, the centralized processing of locally trained ML models is a drawback. Secondly, FL is susceptible to data falsification, which poses a security risk. Lastly, there is a lack of incentive mechanisms for participating nodes, hindering real-life deployment of FL solutions.

6. Research opportunities

The field of GAI is constantly evolving, and there are many exciting research areas that hold promise for future advancements. Based on the topics that have been identified from this literature review, we hope to propose some key areas of focus for future research in GAI.

6.1. Image processing and content analysis

GAI has diverse applications in image and content analysis that rely on information integrity for effective decision-making. As such, ensuring the robustness of GAI models against adversarial attacks is a critical research area (Liu et al., 2020). Adversarial attacks can manipulate the generated content by introducing imperceptible perturbations, leading to undesirable outputs (Jarrahi, 2018). Future research will focus on developing techniques to enhance the robustness of generative models, such as adversarial training, input sanitization, and regularization methods. Additionally, developing defenses against novel adversarial attacks specific to generative models will be essential to ensure their reliability and trustworthiness.

6.2. Content generation

GAI provides new avenues for creativity in the realms of art, music, storytelling, game development, and fashion. Cross-modal GAI focuses on synthesizing content that spans multiple domains, such as generating images from textual descriptions or generating textual descriptions from images (Kanbach et al., 2023). Multi-modal GAI goes a step further by incorporating multiple modalities simultaneously, such as generating images and accompanying sound[149]. Future research will explore methods for cross-modal and multi-modal generation, including alignment techniques, shared representations, and learning joint distributions, enabling more immersive and interactive generative experiences.

Enabling GAI models to interact and co-create with humans is another exciting area of research. This involves developing models that can take user input, preferences, and constraints into account during the generation process[150]. Future research will focus on designing interactive interfaces, dialogue systems, and active learning techniques to facilitate meaningful collaboration between humans and generative models. This opens up possibilities for applications such as co-creative design, personalized content generation, and interactive storytelling.

6.3. Architecture, construction and engineering (AEC)

The use of AI in Computer-Aided Architectural Design (CAAD) enables architects, engineers, and urban planners to harness the benefits of GAIs in creating environmental designs and construction planning. AI simply brings a new direction to architectural and civil engineering research and will soon substantially empower architects in their day-to-day practice. Future work should be focused on the generation of an entire building with more than one floor or detailed rooms including furniture. Current algorithms in practice have a maximum image resolution constraint and hence, future studies should aim to create a GAN framework with a higher output resolution and image quality.

6.4. GPT applications

OpenAI's ChatGPT combines deep learning and language models within the GPT architecture, resulting in a substantial enhancement of chatbot capabilities. There are numerous fruitful avenues for research related to the application of ChatGPT for teaching and learning. Future research should investigate the appropriate ways and processes to introduce tools such as ChatGPT in curriculum design and if ChatGPT can minimize rote learning and do routine jobs like scoring and checking quizzes. The following questions require further investigation- What is the long-term impact of ChatGPT on scholarly writing and research? What is the role of human creativity when ChatGPT is used in scholarly writing?

6.5. Other emerging use cases

Although substantial progress has been made in the field of molecular drug discovery, there is still large room for improving the performance of existing generative models and enhancing the metrics of synthetic accessibility. Issues such as representation, quality, and scarcity of data, make the construction of more satisfying datasets an important area of future research in the field of de novo molecular design. Another interesting avenue for future work is linking appropriate structure-based models with 3D information in an efficient manner. Further research in retrosynthesis is encouraged by the development of friendly and easy-to-use GAI tools.

Current research in the domain of fault detection in mechanical systems assumes that the target and source domains have the same labels. Future research can challenge this assumption and address the problem of class imbalance between the target and source domains. Going ahead, the suitability of deep learning models for fault detection in complex mechanical systems needs to be investigated against the current practice of using ordinary AI models.

6.6. Cognitive Inference & Planning

GAI paves the way for understanding and replicating human-like cognitive abilities and enabling intelligent decision-making in complex environments. While generative models have shown impressive performance, understanding the decision-making process behind their outputs remains a challenge (Li et al., 2019). One crucial research area is developing methods to enhance the explainability and interpretability of GAI models. Future research will focus on developing techniques that provide meaningful explanations for the generation process, making it easier for users to understand and trust the models. This includes investigating methods for generating human-interpretable explanations, visualizing latent spaces, and quantifying the uncertainty in generative outputs.

6.7. Data privacy & security

As concerns over data privacy grow, there is a need for GAI models that can respect and protect individual privacy (Dwivedi et al.,

2023/08). Future research will focus on developing privacy-preserving generative models that can generate meaningful and useful outputs while ensuring the confidentiality of sensitive information. Techniques such as federated learning, differential privacy, and secure multi-party computation will be explored to enable collaborative generative modelling without compromising data privacy.

6.8. The Human-GAI symbiosis

Based on our results, one area that academic research may not have fully addressed is how the workforce should be prepared for an age of GAI. Research could explore how GAI can augment human capabilities rather than replace jobs entirely. Understanding the dynamics of collaboration between humans and AI is crucial for designing effective and inclusive workplace environments (Jarrahi, 2018). The advent of GAI necessitates a shift in the skills required in the workforce. Research should focus on identifying these new skill sets and developing effective training programs for reskilling and upskilling the workforce (Kanbach et al., 2023).

These future research areas aim to address current limitations and push the boundaries of GAI. By focusing on explainability, robustness, cross-modal and multi-modal generation, privacy preservation, and interactive co-creation, researchers can advance the capabilities and responsible use of GAI, making it more applicable and beneficial in various domains and applications.

7. Conclusion

7.1. Contributions

In this review, we have done our utmost to report different areas of research in GAI and highlight recent advances in research. GAI has sparked significant research interest from scholars in various domains. Despite this surging popularity, there has been a lack of a comprehensive literature review that consolidates the main discoveries from the existing body of GAI research, specifically examining significant use cases across sectors. Earlier studies had either focussed on either domain-specific reviews or focus on a single tool type in case of cross-industry reviews that lack a comprehensive overview. This paper moves away from the domain and tool-type focussed review to an interdisciplinary perspective. Our paper offers a holistic understanding of GAI's advancement enabling researchers and practitioners to gain insights into trends, key issues, opportunities, and challenges associated with its methodologies and application.

This paper extensively explores the central themes and topics addressed in previous research concerning GAI using topic modeling techniques. The investigation involves conducting a thorough examination of journal articles, books, book chapters, conference papers, and selected working papers (gathered from Scopus, covering the period from 1985 to 2023) within the field. Traditional algorithms like Latent Dirichlet Allocation (LDA) face challenges like dealing with noisy data, topic overlapping and poor interpretability. Our study deploys BERTopic to analyse the words contained in abstracts and to generate a list of interpretable topics from the previous literature. BERTopic outperforms both classical models such as LDA and NMF as well as more recent clustering-based approaches to topic modelling, such as CTM and Top2Vec. In addition to this, we employ UMAP rather than the classical methods, PCA and t-SNE for dimensionality reduction that retains more of the local and global features of high-dimensional data when projecting it onto lower dimensions.

The Hierarchical Density-Based Spatial Clustering of Applications with Noise (HDBSCAN) utilized in BERTopic prevents unrelated documents from being erroneously assigned to any specific cluster, ultimately enhancing the representation of topics. To further refine the model and optimize 23 topics obtained after analysis, we generated an intertropic distance map and upon comprehensive evaluation and analysis, deduced seven distinct clusters of topics. These clusters represent the intellectual landscape of GAI research and are instrumental in understanding the breadth of existing research on the topic.

7.2. Limitations and future research

Within the past few years, the research in the GAI domain has made huge developments and there are new applications and subject areas coming up every few months. This has also accelerated the pace of research papers being published in the GAI domain. We have only used Scopus as the data source. This limitation can be ameliorated in future research by using other databases. A few of the limitations are related to using BERTopic as the methodology of choice. BERTopic is subject to limitations such as dependency on pre-trained language models, challenges with short text, handling of dynamic and evolving topics, and interpretability and subjectivity. While BERTopic represents a significant advancement in topic modelling, its practical application in academic research necessitates an awareness of these limitations. There is still room for improving the performance of existing models in topic modelling.

Declaration of competing interest

I, Chong Guan hereby declare that I have no conflicts of interest to disclose regarding my professional activities, associations, or financial relationships that could potentially influence or bias the outcomes, decisions, or opinions expressed in the work, research, or activities in which I am involved. This statement is being made in accordance with the principles of transparency, integrity, and accountability.

Appendix A. Research articles included in the data analysis

Authors	Title	Year	Source	Vol, No.	Pages
Phillips R.H., Mouleeswaran C.B.	Knowledge-based approach to generative process planning.	1985	*Autofact, Conference Proceedings*	10	1–15
Granville Charles S.	Impact of applying artificial intelligence with group technology.	1986	*Autofact 86 Conference on Computer and Automated Systems*	–	1–21
Meenakshi Sundaram R.	Process planning and machining sequence	1986	*Computers and Industrial Engineering*	11, Apr	184–188
Emrich Mary	AI odyssey.	1987	*Manufacturing Systems*	5,10	40–42, 44, 46
Granville Charles	AI plus CAPP - recipe for success.	1987	*Manufacturing Systems*	5,5	31–32, 34
Bok S.H., Nee A.Y.C.	MICAPP: A microcomputer-based process planning system	1988	*Journal of Mechanical Working Technology*	17,C	21–31
Henderson M.R., Chang G.-J.	FRAPP: Automated feature recognition and process planning from solid model data	1988	*Computers in Engineering 1988 Proceedings by American Soc of Mechanical Engineers (ASME)*	–	529–536
Irani Erach A., Long John M., Slagle James R.	Experimenting with artificial neural networks - artificial intelligence mini - tutorial - part iii.	1988	*Proceedings of the Symposium on the Engineering of Computer–Based Medical. IEEE Computer Society*	–	45–46
Kempf K.	Artificially intelligent tools for manufacturing process planners.	1988	*Benjamin/Cummings*	–	–
Alting L., Zhang H.	Computer aided process planning: The state-of-the-art survey	1989	*International Journal of Production Research*	27,4	553–585
Jagdale S.S., Wang K.K.	An AI-based generative process planning system for machining operations	1989	*Proceedings of the 2nd International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems, IEA/AIE 1989*	June	528–535
Roth N., Günther Dr., Rummel P., Beutel W.	Model Generation for Sensor-Guided Flexible Assembly Systems	1989	*CIRP Annals – Manufacturing Technology*	38,1	5–8
Spada H., Stumpf M., Opwis K.	The constructive process of knowledge acquisition: Student modeling	1989	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	360 LNCS	486–499
Zhang K.F., Wright A.J., Davies B. J.	A feature-recognition knowledge base for process planning of rotational mechanical components	1989	*The International Journal of Advanced Manufacturing Technology*	4,1	13–25
Hajela P., Sangameshwaran N.	A coupled algorithmic and heuristic approach for optimal structural topology generation	1990	*Computers and Structures*	36,5	971–977
Humm B., Schulz Ch., Radtke M., Warnecke G.	A system for case-based process planning	1991	*Computers in Industry*	17,2	169–180
Silverman B.G.	Expert critics: operationalizing the judgement/decisionmaking literature as a theory of "bugs" and repair strategies	1991	*Knowledge Acquisition*	3,2	175–214
Hirsch R.	"Powerful Stuff"-Discourse Processing: Social and Cognitive Aspects of Content Development in Conversation	1992	*Nordic Journal of Linguistics*	15,1	65–84
Tsang J.P., Cardonne G.	An AI approach to automate the preliminary design phase of electronic equipment for satellites	1992	*Future Generation Computer Systems*	7,4	353–364
Finn D.P.	A physical modeling assistant for the preliminary stages of finite element analysis	1993	*Artificial Intelligence for Engineering, Design, Analysis and Manufacturing*	7,4	275–286
Hsu W.-L., Prietula M.J., Thompson G.L., Si Ow P.	A mixed-initiative scheduling workbench integrating AI, OR and HCI	1993	*Decision Support Systems*	9,3	245–257
Kettler Brian P., Hendler James A., Andersen William A., Evett Matthew P.	Massively parallel support for case-based planning	1993	*Proceedings of the Conference on Artificial Intelligence Applications*	–	3–9
Park S.C., Gervasio M.T., Shaw M. J., DeJong G.F.	Explanation-Based Learning for Intelligent Process Planning	1993	*IEEE Transactions on Systems, Man and Cybernetics*	23,6	1597–1616
Irani S.A., Koo H.-Y., Raman S.	Feature-based operation sequence generation in CAPP	1995	*International Journal of Production Research*	33,1	17–39
Kolen J.F., Pollack J.B.	The observers' paradox: Apparent computational complexity in physical systems	1995	*Journal of Experimental and Theoretical Artificial Intelligence*	7,3	253–277
Lu C.G., Morton D., Wang Z., Myler P., Wu M.H.	Genetic algorithm (GA) solution of inspection path planning system for multiple tasks inspection on co-ordinate measuring machine (CMM)	1995	*IEE Conference Publication*	414	436–441
McCluskey T.L., Kitchin D.E., Porteous J.M.	Object-centred planning: Lifting classical planning from the literal level to the object level	1996	*Proceedings of the International Conference on Tools with Artificial Intelligence*	–	346–353
Dao M.A., Nolla J.A.	Increased efficiency of transduction of cd34+ progenitors by neutralization of tgfβ in serum-free medium on fibronectin support	1997	*Experimental Hematology*	25,8	893–
Papadopoulos H.T., Vouros G.A.	A model management system (MMS) for the design and operation of production lines	1997	*International Journal of Production Research*	35,8	2213–2236
Veloso Manuela M., Mulvehill Alice M., Cox Michael T.	Rationale-supported mixed-initiative case-based planning	1997	*Innovative Applications of Artificial Intelligence – Conference Proceedings*	–	1072–1077
Bienkowski Marie A., Hoebel Louis J.	Integrating AI components for a military planning application	1998	*Proceedings of the National Conference on Artificial Intelligence*	–	561–566

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Myers K.L., Wilkins D.E.	Reasoning about locations in theory and practice	1998	*Computational Intelligence*	14,2	151–187
Hanâckovà Z., Löpez A.P.	Stem structure in Karwinskia parvifolia (Rhamnaceae)	1999	*Biologia*	54,4	431—437
Goebl W.	A survey and a categorization scheme of automatic programming systems	2000	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	1799	1—15
Deb S., Ghosh K.	Artificial intelligence based inference techniques for automated process planning for machined parts	2002	*ASME 2002 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference, IDETC/CIE2002*	1	857–863
Deb S., Ghosh K.	Artificial intelligence based inference techniques for automated process planning for machined parts	2002	*Proceedings of the ASME Design Engineering Technical Conference*	1	857—863
Sadaiah M., Yadav D.R., Mohanram P.V., Radhakrishnan P.	A generative computer-aided process planning system for prismatic components	2002	*International Journal of Advanced Manufacturing Technology*	20,10	709—719
Cemgil A.T., Kappen B.	Monte Carlo methods for tempo tracking and rhythm quantization	2003	*Journal of Artificial Intelligence Research*	18	45—81
Carbonetto P., Kisyński J., De Freitas N., Poole D.	Nonparametric Bayesian logic	2005	*arXiv preprint arXiv:1207.1375*	—	85—93
Leen G., Fyfe C.	Training an AI player to play Pong using a GTM	2005	—	—	270—276
Mateas M., Stern A.	Structuring content in the façade interactive drama architecture	2005	*Proceedings of the AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment*	1,1	93—98
Neilsen E.H.	Using attachment theory to compare traditional action research and appreciative inquiry	2005	*Academy of Management Proceedings*	2005 , 1	—
Rubin S.H., Chen S.-C., Law J.B., Lee G.K.	On the inherent necessity of heuristic proofs	2005	*Conference Proceedings — IEEE International Conference on Systems, Man and Cybernetics*	4,	3890—3896
Epshteyn A., DeJong G.	Generative prior knowledge for discriminative classification	2006	*Journal of Artificial Intelligence Research*	27,	25—53
Lugrin J.-L., Cavazza M., Crooks S., Palmer M.	Artificial intelligence-mediated interaction in virtual reality art	2006	*IEEE Intelligent Systems*	21,5	54—62
Leake D., Kendall-Morwick J.	Towards case-based support for e-Science workflow generation by mining provenance	2008	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	5239 LNAI	269—283
Li H.X., Williams B.C.	Generative planning for hybrid systems based on Flow Tubes	2008	*ICAPS*	—	206—213
Zhu J., Harrell D.F.	Daydreaming with intention: Scalable blending-based imagining and agency in generative interactive narrative	2008	*AAAI Spring Symposium — Technical Report*	SS—08—03	156—162
Buscema M.	The general philosophy of artificial adaptive systems	2009	*ARCHEOSEMA. Artificial Adaptive Systems for the Analysis of Complex Phenomena.*	—	1—4
Hogg D.	Motion and object class discovery from video	2009	*VISAPP*	—	IS17—IS19
Buscema M.	The general philosophy of the artificial adaptive systems	2010	*Applications of Mathematics in Models, Artificial Neural Networks and Arts: Mathematics and Society*	—	197—226
Bushe G.R.	A comparative case study of appreciative inquiries in one organization: Implications for practice	2010	*Revista de Cercetare si Interventie Sociala*	29,1	7—24
Calabrese R., Hester M., Friesen S., Burkhalter K.	Using appreciative inquiry to create a sustainable rural school district and community	2010	*International Journal of Educational Management*	24,3	250—265
Chow K.K.N., Harrell D.F.	The generative visual renku project: Integrating multimedia semantics, animation, and interface design	2010	*CHI'10 Extended Abstracts on Human Factors in Computing Systems*	—	3013—3018
Cuyvers G.	Appreciative inquiry as a foundation for quality development	2010	*Revista de Cercetare si Interventie Sociala*	30,1	39—52
Deja M., Siemiatkowski M.	Generation of optimal process plan alternatives for manufacturing mechanical components	2010	*Solid State Phenomena*	165	250—255
Fendt M.W.	Dynamic social planning and intention revision in generative story planning	2010	*Proceedings of the Fifth International Conference on the Foundations of Digital Games*	—	254—255
Grandy G., Holton J.	Mobilizing change in a business school using appreciative inquiry	2010	*Learning Organization*	17,2	178—194
Kornai A.	The algebra of lexical semantics	2010	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	6149 LNAI,M4D	174—199
Kriegel M., Aylett R.	Crowd-sourced AI authoring with ENIGMA	2010	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	6432 LNCS	275—278
Marchi S.	Participatory and appreciative action and reflection in adult learning: Transformation as appreciative reflection	2010	*CHI'10 Extended Abstracts on Human Factors in Computing Systems*	—	723—739

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Patel M., Valls Miro J., Dissanayake G.	Dynamic bayesian networks for learning interactions between assistive robotic walker and human users	2010	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	6359 LNAI	333—340
Smith D., Morgan B.	IsisWorld: An open source commonsense simulator for AI researchers	2010	*AAAI Workshop — Technical Report*	WS—10—04	54—57
Xu J., Shelton C.R.	Intrusion detection using continuous time bayesian networks	2010	*Journal of Artificial Intelligence Research*	39	745—774
Dormans J., Bakkes S.	Generating missions and spaces for adaptable play experiences	2011	*IEEE Transactions on Computational Intelligence and AI in Games*	3,3	216—228
Hoffmann S., Spierling U., Struck G.	A practical approach to introduce story designers to planning	2011	*Proceedings of GET*	—	59—66
Jordan L., Thatchenkery T.	Leadership decision-making strategies using appreciative inquiry: A case study	2011	*International Journal of Globalisation and Small Business*	4,2	178–190
Pease A., Colton S.	On impact and evaluation in computational creativity: A discussion of the Turing test and an alternative proposal	2011	*Proceedings of the AISB symposium on AI and Philosophy*	–	15–22
Piacenza A., Guerrini F., Adami N., Leonardi R., Teutenberg J., Porteous J., Cavazza M.	Generating story variants with constrained video recombination	2011	*Proceedings of the 19th ACM international conference on Multimedia*	—	223—232
Talvitie E., Singh S.	Learning to make predictions in partially observable environments without a generative model	2011	*Journal of Artificial Intelligence Research*	42,	353—392
Antunes R.F., Leymarie F.F.	Generative choreography: Animating in real-time dancing avatars	2012	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	7247 LNCS	1—10
Horswill I.	Punch and Judy AI playset: A generative farce manifesto or: The tragical comedy or comical tragedy of predicate calculus	2012	*AAAI Workshop — Technical Report*	WS—12—14	14—19
Nadin M.	The anticipatory profile. An attempt to describe anticipation as process	2012	*International Journal of General Systems*	41,1	43—75
Rocca G.L.	Knowledge based engineering: Between AI and CAD. Review of a language based technology to support engineering design	2012	*Advanced Engineering Informatics*	26,2	159—179
Synnaeve G., Bessière P.	Special tactics: A Bayesian approach to tactical decision-making	2012	*IEEE Conference on Computational Intelligence and Games (CIG)*	—	409—416
Wang B.P.-Y.	Usage effects on the cognitive routinization of chinese resultative verbs	2012	*Research in Language*	10,4	405—422
Weigand K.A., Hartung R.	Abduction's role in reverse engineering software	2012	*IEEE National Aerospace and Electronics Conference (NAECON)*	—	57–62
Antunes R.F., Leymarie F.F.	An ecosystem based model for real-time generative animation of humanoid non-player characters	2013	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	8154 LNAI	66–77
Barros-Pose I.	The evolution of appreciative inquiry: A novel approach in the making	2013	*Advances in Appreciative Inquiry*	4	391–407
Bright D.S., Powley E.H., Fry R.E., Barrett F.	The generative potential of cynical conversations	2013	*Advances in Appreciative Inquiry*	4	135–157
Chrpa L., Vallati M., McCluskey T. L.	Determining linearity of optimal plans by operator schema analysis	2013	*AAAI Press*	–	34–41
Godwin L.N., Kaplan P., Bodiford K.	The exponential inquiry effect magnified: The new AI summit in a technologically connected world	2013	*Advances in Appreciative Inquiry*	4	249–274
Johnson P.C.	Transcending the polarity of light and shadow in appreciative inquiry: An appreciative exploration of practice	2013	*Advances in Appreciative Inquiry*	4	189–207
McGuigan M., Murphy C.J.	Ensuring generativity beyond the AI summit event: A practical guide for designing an AI summit and advancing post-summit momentum	2013	*Advances in Appreciative Inquiry*	4	311–338
Nicholson C., Barnes J.	Appreciative inquiry	2013	*Participatory Research in Palliative Care: Actions and Reflections*	–	64–73
Perez D., Samothrakis S., Lucas S. M., Rohlfshagen P.	Rolling horizon evolution versus tree search for navigation in single-player real-time games	2013	*Proceedings of the 15th annual conference on Genetic and evolutionary computation*	–	351–358
Sauper C., Barzilay R.	Automatic aggregation by joint modeling of aspects and values	2013	*Journal of Artificial Intelligence Research*	46	89–127
Schroeder T.	Collective actualization: An interpretation of Rogers' necessary conditions for change	2013	*Advances in Appreciative Inquiry*	4	291–309
Coleman O.J., Blair A.D., Clune J.	Automated generation of environments to test the general learning capabilities of AI agents	2014	*Proceedings of the 2014 Annual Conference on Genetic and Evolutionary Computation*	–	161–168
Dollens D.	Alan Turing's Drawings, Autopoiesis and Can Buildings Think?	2014	*Leonardo*	47,3	249–253
Erdine E., Kallegias A.	Reprogramming Architecture Learning via Practical Methodologies	2014	*Proceedings of the International Conference on Education and Research in Computer Aided Architectural Design in Europe*	1	373–380

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Oh J., Meneguzzi F., Sycara K.	Probabilistic Plan Recognition for Proactive Assistant Agents	2014	*Plan, activity, and intent recognition*	10	275–288
Quinney S., Richardson L.	Organisational development, appreciative inquiry and the development of Psychologically Informed Environments (PIEs): Part two: The pilot study and evaluation	2014	*Housing, Care and Support*	17,3	131–141
Quinney S., Richardson L.	Organisational development, appreciative inquiry and the development of Psychologically Informed Environments (PIEs). Part I: A positive psychology approach	2014	*Housing, Care and Support*	17,2	95–102
Bushe G.R., Paranjpey N.	Comparing the Generativity of Problem Solving and Appreciative Inquiry: A Field Experiment	2015	*Journal of Applied Behavioral Science*	51,3	309–335
Dollens D.	Autopoiesis + extended cognition + nature = can buildings think?	2015	*Communicative and Integrative Biology*	8,4	1–10
Lilja J., Richardsson D.	Why is it suddenly so easy to change?	2015	*International Journal of Quality and Service Sciences*	7,44987	334–348
Stavros J.M., Godwin L.N., Cooperrider D.L.	Appreciative Inquiry: Organization Development and the Strengths Revolution	2015	*Practicing organization development: Leading transformation and change*	–	96–116
Szilas N.	Reconsidering the role of AI in interactive digital narrative	2015	*Interactive Digital Narrative. Routledge*	–	136–149
Van De Bogart W.	Information entanglement: Developments in cognitive based knowledge acquisition strategies based on big data	2015	*Proceedings of the International Conference on Intellectual Capital, Knowledge Management and Organisational Learning, ICICKM*	January	299–307
Delgadillo L.M., Palmer L., Goetz J.	A Case Study Demonstrating the Use of Appreciative Inquiry in a Financial Coaching Program	2016	*Family and Consumer Sciences Research Journal*	45,2	166–178
Jarrold W., Yeh P.Z.	The social-emotional turing challenge	2016	*AI Magazine*	37,1	31–38
Reed S., Akata Z., Yan X., Logeswaran L., Schiele B., Lee H.	Generative adversarial text to image synthesis	2016	*33rd International Conference on Machine Learning, ICML 2016*	3,	1681–1690
Samuel B., Ryan J., Summerville A., Mateas M., Wardrip-Fruin N.	Computatrum personae: Toward a role-based taxonomy of (computationally assisted) performance	2016	*AAAI Workshop – Technical Report*	WS–16–21 – WS–16–23	79–85
Azimpourkivi M., Topkara U., Carbunar B.	A secure mobile authentication alternative to biometrics	2017	*ACM International Conference Proceeding Series*	Part F132521	28–41
Das A., Kottur S., Gupta K., Singh A., Yadav D., Moura J.M.F., Parikh D., Batra D.	Visual dialog	2017	*Proceedings – 30th IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2017*	January	1080–1089
Loughran R., O'Neill M.	Limitations from assumptions in generative music evaluation	2017	*Journal of Creative Music Systems*	2	1–13
Lovell D.H.	The Grayman project	2017	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	10289 LNCS	704–718
Queen K.H.	Six emerging aerospace capabilities to watch	2017	*Manufacturing Engineering*	159,3	81–83
Sandars J., Murdoch-Eaton D.	Appreciative inquiry in medical education*	2017	*Medical Teacher*	39,2	123–127
Shah H., Barber D., Botev A.	Overdispersed variational autoencoders	2017	*Proceedings of the International Joint Conference on Neural Networks*	May	1109–1116
Smith G.	Generative design for textiles: Opportunities and challenges for entertainment AI	2017	*Proceedings of the AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment*	13,1	115–121
Soto-Morettini D.	Reverse engineering the human: artificial intelligence and acting theory	2017	*Connection Science*	29,1	64–76
Verma D.C., Bent G.	Policy enabled caching for distributed AI	2017	*Proceedings – 2017 IEEE International Conference on Big Data, Big Data 2017*	January	3017–3023
Vieira A.	Business applications of deep learning	2017	*Ubiquitous Machine Learning and Its Applications. IGI Global*	–	39–67
Young J., Yang W., Young S.-W., Yu Q.	Presently untitled: Data mapping of 2016 U. S. presidential election twitter activity, Phase III	2017	*Proceedings of the 25th ACM international conference on Multimedia*	–	580–581
Akimoto T.	Stories as mental representations of an agent s subjective world: A structural overview	2018	*Biologically Inspired Cognitive Architectures*	25,	107–112
Al-muzaini H.A., Al-yahya T.N., Benhidour H.	Automatic Arabic image captioning using RNN-LSTM-based language model and CNN	2018	*International Journal of Advanced Computer Science and Applications*	9,6	67–73
Brown N., Cambruzzi J., Cox P.J., Davies M., Dunbar J., Plumbley D., Sellwood M.A., Sim A., Williams-Jones B.I., Zwierzyna M., Sheppard D.W.	Big Data in Drug Discovery	2018	*Progress in Medicinal Chemistry*	57,1	277–356
Chen F., Song L., Chen Y.	ReGAN: A pipelined ReRAM-based accelerator for generative adversarial networks	2018	*Proceedings of the Asia and South Pacific Design Automation Conference, ASP–DAC*	January	178–183
Cirincione G., Verma D., Bertino E., Swami A.	Security Issues for Distributed Fusion in Coalition Environments	2018	*21st International Conference on Information Fusion (FUSION). IEEE*	–	830–837

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Cooke P.	Generative growth with 'thin' globalization: Cambridge's crossover model of innovation	2018	*European Planning Studies*	26,9	1815–1834
Day M.-Y., Lin J.-T., Chen Y.-C.	Artificial intelligence for conversational robo-advisor	2018	*IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*	–	1057–1064
Dipaola S., Gabora L., McCaig G.	Informing artificial intelligence generative techniques using cognitive theories of human creativity	2018	*Procedia Computer Science*	145	158–168
Dong H.-W., Hsiao W.-Y., Yang L.-C., Yang Y.-H.	Musegan: Multi-track sequential generative adversarial networks for symbolic music generation and accompaniment	2018	*Proceedings of the AAAI Conference on Artificial Intelligence*	32,1	34–41
Doran D., Schulz S., Besold T.R.	What does explainable AI really mean? A new conceptualization of perspectives	2018	*CEUR Workshop Proceedings*	2071	–
Giles M., Klok C.H.	The GANfather: The man who's given machines the gift of imagination	2018	*Technology Review*	121,2	48–53
Gonzalez-Rodriguez D., Hernandez-Carrion J.R.	Self-Organized Linguistic Systems: From traditional AI to bottom-up generative processes	2018	*Futures*	103	27–34
Grieten S., Lambrechts F., Bouwen R., Huybrechts J., Fry R., Cooperrider D.	Inquiring Into Appreciative Inquiry: A Conversation With David Cooperrider and Ronald Fry	2018	*Journal of Management Inquiry*	27,1	101–114
Kazuhiro K., Werner R.A., Toriumi F., Javadi M.S., Pomper M.G., Solnes L.B., Verde F., Higuchi T., Rowe S.P.	Generative Adversarial Networks for the Creation of Realistic Artificial Brain Magnetic Resonance Images	2018	*Tomography (Ann Arbor, Mich.)*	4,4	159–163
Kim S.T., Lee H., Kim H.G., Ro Y.M.	ICADx: Interpretable computer aided diagnosis of breast masses	2018	*Progress in Biomedical Optics and Imaging – Proceedings of SPIE*	10575	–
Li Y., Pan Q., Wang S., Yang T., Cambria E.	A Generative Model for category text generation	2018	*Information Sciences*	450	301–315
Lopez-Rincon O., Starostenko O., Martin G.A.-S.	Algoritmic music composition based on artificial intelligence: A survey	2018	*2018 28th International Conference on Electronics, Communications and Computers, CONIELECOMP 2018*	January	187–193
Loui R.	Plausible Deniability for ISP Log and Browser Suggestion Obfuscation with a Phrase Extractor on Potentially Open Text	2018	*Proceedings – 2017 IEEE 15th International Conference on Dependable, Autonomic and Secure Computing*	January	276–279
Lu Z., Li Z., Cao J., He R., Sun Z.	Recent progress of face image synthesis	2018	*4th IAPR Asian Conference on Pattern Recognition (ACPR)*	–	13–18
Ma Y., Liu K., Guan Z., Xu X., Qian X., Bao H.	Background augmentation generative adversarial networks (BAGANs): Effective data generation based on GAN-augmented 3D synthesizing	2018	*Symmetry*	10,12	734
Maksymyuk T., Gazda J., Luntovskyy A., Klymash M.	Artificial intelligence based 5G coverage design and optimization using deep generative adversarial neural networks	2018	*International Conference on Information and Telecommunication Technologies and Radio Electronics (UkrMiCo)*	–	1–4
Mirco T.	Evolutionary algorithms with neural networks to optimize big data cache	2018	*CEUR Workshop Proceedings*	2249	6–10
Morais D., Waldie M., Roberts P., David P.	How to implement tech in shipbuilding: Charting the course to success	2018	*SNAME Maritime Convention*	–	–
Moruzzi C.	Creative AI: Music Composition Programs as an Extension of the Composer's Mind	2018	*Studies in Applied Philosophy, Epistemology and Rational Ethics*	44	69–72
Muehlbauer M.	Towards typogenetic tools for generative urban aesthetics	2018	*Smart and Sustainable Built Environment*	7,1	20–32
Salge C., Green M.C., Canaan R., Togelius J.	Generative design in minecraft (GDMC): Settlement generation competition	2018	*Proceedings of the 13th International Conference on the Foundations of Digital Games*	–	1–10
Seo S., Chan H., Brantingham P.J., Leap J., Vayanos P., Tambe M., Liu Y.	Partially Generative Neural Networks for Gang Crime Classification with Partial Information	2018	*Proceedings of the 2018 AAAI/ACM Conference on AI, Ethics, and Society*	–	257–263
Shakirov V.V., Solovyeva K.P., Dunin-Barkowski W.L.	Review of State-of-the-Art in Deep Learning Artificial Intelligence	2018	*Optical Memory and Neural Networks (Information Optics)*	27,2	65–80
Sharma S., Sharma D.	Intelligently applying artificial intelligence in chemoinformatics	2018	*Current Topics in Medicinal Chemistry*	18,20	1804–1826
Simon B., Resch G., Coleman B., Ratto M.	Secret lives of data publics: Mixed reality smart city interfaces	2018	*Conference on Human Factors in Computing Systems – Proceedings*	–	1–7
Taniguchi T.	Simulation for AI	2018	*Humanoid Robotics: A Reference*	–	2087–2110
Veillard A., Morère O., Grout M., Gruffeille J.	Fast 3D seismic interpretation with unsupervised deep learning: Application to a potash network in the North Sea	2018	*80th EAGE Conference and Exhibition 2018: Opportunities Presented by the Energy Transition*	2018,1	1–5
Verma D., Calo S., Cirincione G.	Distributed AI and security issues in federated environments	2018	*ACM International Conference Proceeding Series*	–	1–6
Volz V., Lucas S.M., Schrum J., Smith A., Liu J., Risi S.	Evolving Mario levels in the latent space of a deep convolutional generative adversarial network	2018	*GECCO 2018 – Proceedings of the 2018 Genetic and Evolutionary Computation Conference*	–	221–228
Wan S., Kaneko T.	Imitation Learning for Playing Shogi Based on Generative Adversarial Networks	2018	*Proceedings – 2017 Conference on Technologies and Applications of Artificial Intelligence, TAAI 2017*	–	92–95
Xu C., Zhao B.	Satellite image spoofing: Creating remote sensing dataset with generative adversarial networks	2018	*10th International conference on geographic information science (GIScience 2018)*	114	–

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Al-Shabandar R., Lightbody G., Browne F., Liu J., Wang H., Zheng H.	The application of artificial intelligence in financial compliance management	2019	*ACM International Conference Proceeding Series*	–	1–6
Amarasinghe A.M.S.N., Wijesinghe W.A.C.H., Nirmana D.L.A., Jayakody A., Priyankara A.M.S.	AI Based Cyber Threats and Vulnerability Detection, Prevention and Prediction System	2019	*2019 International Conference on Advancements in Computing, ICAC 2019*	–	363–368
Arafati A., Hu P., Finn J.P., Rickers C., Cheng A.L., Jafarkhani H., Kheradvar A.	Artificial intelligence in pediatric and adult congenital cardiac MRI: An unmet clinical need	2019	*Cardiovascular Diagnosis and Therapy*	9	S310–S325
Bai W., Quan C., Luo Z.-W.	Improving generative and discriminative modelling performance by implementing learning constraints in encapsulated variational autoencoders	2019	*Applied Sciences (Switzerland)*	9,12	2511
Ballagas R., Wei J., Vankipuram M., Li Z., Spies K., Horii H.	Exploring Pervasive Making Using Generative Modeling and Speech Input	2019	*IEEE Pervasive Computing*	18,4	20–28
Banerjee R.H., Rajagopal A., Jha N., Patro A., Rajan A.	Let AI Clothe You: Diversified Fashion Generation	2019	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	11367 LNCS	75–87
Bashkirova D., Usman B., Saenko K.	Adversarial self-defense for cycle-consistent GANs	2019	*Advances in Neural Information Processing Systems*	32	–
Becker A.S., Jendele L., Skopek O., Berger N., Ghafoor S., Marcon M., Konukoglu E.	Injecting and removing suspicious features in breast imaging with CycleGAN: A pilot study of automated adversarial attacks using neural networks on small images	2019	*European Journal of Radiology*	120	108649
Begoli E., Brown K., Srinivas S., Tamang S.	SynthNotes: A Generator Framework for High-volume, High-fidelity Synthetic Mental Health Notes	2019	*Proceedings – 2018 IEEE International Conference on Big Data, Big Data 2018*	–	951–958
Bhattacharjee A., Barve Y., Khare S., Bao S., Kang Z., Gokhale A., Damiano T.	STRATUM: A BigData-as-a-Service for Lifecycle Management of IoT Analytics Applications	2019	*Proceedings – 2019 IEEE International Conference on Big Data, Big Data 2019*	–	1607–1612
Bianconi F., Filippucci M.	WOOD, CAD AND AI: Digital modelling as place of convergence of natural and artificial intelligent to design timber architecture	2019	*Lecture Notes in Civil Engineering*	24	3–60
Bingham E., Chen J.P., Jankowiak M., Obermeyer F., Pradhan N., Karaletsos T., Singh R., Szerlip P., Horsfall P., Goodman N.D.	Pyro: Deep universal probabilistic programming	2019	*Journal of Machine Learning Research*	20,1	973–8
Brown N., Fiscato M., Segler M.H. S., Vaucher A.C.	GuacaMol: Benchmarking Models for de Novo Molecular Design	2019	*Journal of Chemical Information and Modeling*	59,3	1096–1108
Caccia L., Hoof H.V., Courville A., Pineau J.	Deep Generative Modeling of LiDAR Data	2019	*IEEE International Conference on Intelligent Robots and Systems*	–	5034–5040
Campo M.D., Manninger S., Carlson A.	Imaginary Plans the potential of 2D to 2D Style transfer in planning processes	2019	*Ubiquity and Autonomy – Paper Proceedings of the 39th Annual Conference of the Association for Computer Aided Design in Architecture, ACADIA 2019*	–	412–418
Cao N., Yan X., Shi Y., Chen C.	AI-Sketcher: A deep generative model for producing high-quality sketches	2019	*33rd AAAI Conference on Artificial Intelligence, AAAI 2019, 31st Innovative Applications of Artificial Intelligence Conference, IAAI 2019 and the 9th AAAI Symposium on Educational Advances in Artificial Intelligence, EAAI 2019*	–	2564–2571
Chen H., Xiao Q., Yin X.	Generating music algorithm with deep convolutional generative adversarial networks	2019	*2019 2nd International Conference on Electronics Technology, ICET 2019*	–	576–580
Cheoh J.L., Brunswicker S.	Humans' perceptions of handwritten digits generated by a generative adversarial network	2019	*Proceedings of the International Conference on Industrial Engineering and Operations Management*	–	1145–1151
Colton S., Pease A., Cook M., Chen C.	The HR3 system for automated code generation in creative settings	2019	*Proceedings of the 10th International Conference on Computational Creativity, ICCC 2019*	–	108–115
Corea F.	AI Knowledge Map: How to Classify AI Technologies	2019	*Studies in Big Data*	50	25–29
Cunnington D., Law M., De Mel G., Manotas I., Bertino E., Calo S., Verma D.	Towards a learning-Algorithm agnostic generative policy model for coalitions	2019	*Proceedings of SPIE – The International Society for Optical Engineering*	11006	171–185
Das A., Kottur S., Gupta K., Singh A., Yadav D., Lee S., Moura J.M. F., Parikh D., Batra D.	Visual Dialog	2019	*IEEE Transactions on Pattern Analysis and Machine Intelligence*	41,5	1242–1256
Day M.-Y., Hung C.-S.	AI affective conversational robot with hybrid generative-based and retrieval-based dialogue models	2019	*Proceedings – 2019 IEEE 20th International Conference on Information Reuse and Integration for Data Science, IRI 2019*	–	403–409
Demir I., Pang G., Huang J.	A computer vision perspective on analyzing and synthesizing geospatial data	2019	*International Geoscience and Remote Sensing Symposium (IGARSS)*	2019–July,	4807–4810
Ding Y., Ma L., Ma J., Wang C., Lu C.	A generative adversarial network-based intelligent fault diagnosis method for rotating machinery under small sample size conditions	2019	*IEEE Access*	7	149736–149749

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Ding Y., Mishra N., Hoffmann H.	Generative and multi-phase learning for computer systems optimization	2019	*Proceedings – International Symposium on Computer Architecture*	–	39–52
Dong X., Lei Y., Tian S., Wang T., Patel P., Curran W.J., Jani A.B., Liu T., Yang X.	Synthetic MRI-aided multi-organ segmentation on male pelvic CT using cycle consistent deep attention network	2019	*Radiotherapy and Oncology*	141	192–199
Fournaris A.P., Lalos A.S., Serpanos D.	Generative Adversarial Networks in AI-Enabled Safety-Critical Systems: Friend or Foe?	2019	*Computer*	52,9	78–81
Giglio A., Paoletti I.	Scenario for embedding AI in acoustic design. Exploiting applications at several design stages	2019	*Proceedings of the International Congress on Acoustics*	September	2567–2574
Guo P., Duan F., Wang P., Yao Y., Yin Q., Xin X., Li D., Qian L., Wang S., Pan Z., Zhang L.	Pulsar candidate classification using generative adversary networks	2019	*Monthly Notices of the Royal Astronomical Society*	490,4	5424–5439
Hassine T., Neeman Z.	The zombification of art history: How ai resurrects dead masters, and perpetuates historical biases	2019	*Journal of Science and Technology of the Arts*	11,2	28–35
Holstein K., McLaren B.M., Aleven V.	Co-designing a real-time classroom orchestration tool to support teacher–ai complementarity	2019	*Journal of Learning Analytics*	6,2	27–52
Hoover A.K., Spryszynski A., Halper M.	Deep learning in the IT curriculum	2019	*SIGITE 2019 – Proceedings of the 20th Annual Conference on Information Technology Education*	–	49–54
Hussain S., Ameri Sianaki O., Ababneh N.	A Survey on Conversational Agents/ Chatbots Classification and Design Techniques	2019	*Advances in Intelligent Systems and Computing*	927	946–956
Irfan A., Zafar A., Hassan S.	Evolving levels for general games using deep convolutional generative adversarial networks	2019	*2019 11th Computer Science and Electronic Engineering Conference, CEEC 2019 – Proceedings*	–	96–101
Jiang Y., Lian Z., Tang Y., Xiao J.	SCFont: Structure-guided Chinese font generation via deep stacked networks	2019	*33rd AAAI Conference on Artificial Intelligence, AAAI 2019, 31st Innovative Applications of Artificial Intelligence Conference, IAAI 2019 and the 9th AAAI Symposium on Educational Advances in Artificial Intelligence, EAAI 2019*	–	4015–4022
Jiao Z., You H., Yang F., Li X., Zhang H., Shen D.	Decoding EEG by visual-guided deep neural networks	2019	*IJCAI International Joint Conference on Artificial Intelligence*	August	1387–1393
Jin X., Chen Z., Lin J., Zhou W., Chen J., Shan C.	AI-GAN: Signal de-interference via asynchronous interactive generative adversarial network	2019	*Proceedings – 2019 IEEE International Conference on Multimedia and Expo Workshops, ICMEW 2019*		228–233
Kang Y., Gao S., Roth R.E.	Transferring multiscale map styles using generative adversarial networks	2019	*International Journal of Cartography*	5,44987	115–141
Kayacik C., Chen S., Noerly S., Holbrook J., Roberts A., Eck D.	Identifying the intersections: User experience + research scientist collaboration in a generative machine learning interface	2019	*Conference on Human Factors in Computing Systems – Proceedings*	–	1–8
Kim Y., Hong S.	Deep learning-generated nighttime reflectance and daytime radiance of the midwave infrared band of a geostationary satellite	2019	*Remote Sensing*	11,22	2713
Kreminski M., Acharya D., Junius N., Oliver E., Compton K., Dickinson M., Focht C., Mason S., Mazeika S., Wardrip-Fruin N.	Cozy mystery construction kit: Prototyping toward an AI-assisted collaborative storytelling mystery game	2019	*Proceedings of the 14th International Conference on the Foundations of Digital Games*	–	1–9
Lam L.T., Hsiao S.-W.	AI-Based Online P2P Lending Risk Assessment on Social Network Data with Missing Value	2019	*Proceedings – 2019 IEEE International Conference on Big Data, Big Data 2019*	–	6113–6115
Leach N.	Do Robots Dream of Digital Sheep?	2019	*Ubiquity and Autonomy – Paper Proceedings of the 39th Annual Conference of the Association for Computer Aided Design in Architecture, ACADIA 2019*	–	298–309
Lewis S.C., Guzman A.L., Schmidt T.R.	Automation, Journalism, and Human–Machine Communication: Rethinking Roles and Relationships of Humans and Machines in News	2019	*Digital Journalism*	7,4	409–427
Li Y., Chang M.-C., Lyu S.	In Ictu Oculi: Exposing AI created fake videos by detecting eye blinking	2019	*10th IEEE International Workshop on Information Forensics and Security, WIFS 2018*	–	1–7
Liikkanen L.A.	It AIn't Nuttin' New – Interaction Design Practice After the AI Hype	2019	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	11749 LNCS	600–604
Liu J., Qu F., Hong X., Zhang H.	A Small-Sample Wind Turbine Fault Detection Method With Synthetic Fault Data Using Generative Adversarial Nets	2019	*IEEE Transactions on Industrial Informatics*	15,7	3877–3888
Liu L., Zhang H., Ji Y., Jonathan Wu Q.M.	Toward AI fashion design: An Attribute-GAN model for clothing match	2019	*Neurocomputing*	341	156–167
Liu Z., Gao F., Wang Y.	A Generative Adversarial Network for AI-Aided Chair Design	2019	*Proceedings – 2nd International Conference on Multimedia Information Processing and Retrieval, MIPR 2019*	–	486–490

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
McCormack J., Gifford T., Hutchings P.	Autonomy, authenticity, authorship and intention in computer generated art	2019	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	11453 LNCS	35–50
McCormack J., Teresa Llano Rodriguez M., Gifford T., Yee-King M., Hutchings P., D'Inverno M.	In a silent way communication between AI and improvising musicians beyond sound	2019	*Conference on Human Factors in Computing Systems – Proceedings*	–	1–11
Miracchi L.	A competence framework for artificial intelligence research	2019	*Philosophical Psychology*	32,5	588–633
Modrzejewski M., Dorobek M., Rokita P.	Application of Deep Neural Networks to Music Composition Based on MIDI Datasets and Graphical Representation	2019	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	11508 LNAI	143–152
Moruzzi C.	AI-generated music: Creativity and autonomy	2019	*2019 AISB Convention*	–	25–32
Nakamura K.	My algorithms have determined you're not human: AI-ML, reverse turing-tests, and the disability experience	2019	*ASSETS 2019 – 21st International ACM SIGACCESS Conference on Computers and Accessibility*	–	1–2
Oh S., Jung Y., Kim S., Lee I., Kang N.	Deep generative design: Integration of topology optimization and generative models	2019	*Journal of Mechanical Design, Transactions of the ASME*	141,11	111405
Oleszkiewicz W., Kairouz P., Piczak K., Rajagopal R., Trzciński T.	Siamese Generative Adversarial Privatizer for Biometric Data	2019	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	11365 LNCS	482–497
Paliwal C., Biyani P.	To each route its own ETA: A generative modeling framework for ETA prediction	2019	*2019 IEEE Intelligent Transportation Systems Conference, ITSC 2019*	–	3076–3081
Qiu Z., Ren Y., Li C., Liu H., Huang Y., Yang Y., Wu S., Zheng H., Ji J., Yu J., Zhang K.	Mind Band: A crossmedia AI music composing platform	2019	*MM 2019 – Proceedings of the 27th ACM International Conference on Multimedia*	–	2231–2233
Rahnemoonfar M., Johnson J., Paden J.	AI radar sensor: Creating radar depth sounder images based on generative adversarial network	2019	*Sensors*	19,24	5479
Salapura V., Wood D., Witherspoon S.A., Grueneberg K., Bertino E., Jabal A.A., Calo S.	Generative policy framework for AI training data curation	2019	*Proceedings – 2019 IEEE International Conference on Smart Computing, SMARTCOMP 2019*	–	475–477
Sekiguchi K., Hori K.	Can ethics enhance creative design activity?	2019	*Proceedings of the International Conference on Engineering Design, ICED*	August	3181–3190
Sim J.H.	Exploring the Relational Leadership Potential of Appreciative Inquiry: A Case Study	2019	*South Asian Journal of Business and Management Cases*	8,1	47–57
Ståhl N., Falkman G., Karlsson A., Mathiason G., Boström J.	Deep Reinforcement Learning for Multiparameter Optimization in de novo Drug Design	2019	*Journal of Chemical Information and Modeling*	59,7	3166–3176
Sun L., Chen P., Xiang W., Chen P., Gao W.-Y., Zhang K.-J.	SmartPaint: a co-creative drawing system based on generative adversarial networks	2019	*Frontiers of Information Technology and Electronic Engineering*	20,12	1644–1656
Tan X., Chng C.-B., Su Y., Lim K.-B., Chui C.-K.	Robot-Assisted Training in Laparoscopy Using Deep Reinforcement Learning	2019	*IEEE Robotics and Automation Letters*	4,2	485–492
Thieling J., Elspas P., Rosmann J.	Neural networks for end-to-end refinement of simulated sensor data for automotive applications	2019	*SysCon 2019 – 13th Annual IEEE International Systems Conference, Proceedings*	–	1–8
Todorović V., Grba D.	Wandering machines narrativity in generative art	2019	*Journal of Science and Technology of the Arts*	11,2	50–58
Toulkeridou V.	Steps towards AI augmented parametric modeling systems for supporting design exploration	2019	*Proceedings of the International Conference on Education and Research in Computer Aided Architectural Design in Europe*	1	81–90
Tsai Y., Wei C.C.	Accelerated Disaster Reconnaissance Using Automatic Traffic Sign Detection with UAV and AI	2019	*Computing in Civil Engineering 2019: Smart Cities, Sustainability, and Resilience – Selected Papers from the ASCE International Conference on Computing in Civil Engineering 2019*	–	405–411
van de Laar T.W., de Vries B.	Simulating active inference processes by message passing	2019	*Frontiers Robotics AI*	6,MAR	20
Verma D., Bertino E., De Mel G., Melrose J.	On the impact of generative policies on security metrics	2019	*Proceedings – 2019 IEEE International Conference on Smart Computing, SMARTCOMP 2019*		104–109
Williams R., Park H.W., Breazeal C.	A is for artificial intelligence the impact of artificial intelligence activities on young children's perceptions of robots	2019	*Conference on Human Factors in Computing Systems – Proceedings*	–	1–11
Wrigley P., Hall R., Wood P., Robertson D., Stewart P.P., Ellis K.	Automated design techniques for new nuclear power plant design: Knowledge based engineering, generative design and optimisation	2019	*International Conference on Nuclear Engineering, Proceedings, ICONE*	27	1314
Xu H., Wang Y., Wang Y., Li J., Liu B., Han Y.	ACG-engine: An inference accelerator for content generative neural networks	2019	*IEEE/ACM International Conference on Computer–Aided Design, Digest of Technical Papers, ICCAD*	–	1–7
Yadav D., Salmani S.	Deepfake: A survey on facial forgery technique using generative adversarial network	2019	*2019 International Conference on Intelligent Computing and Control Systems, ICCS 2019*	–	852–857

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Yadlapalli A.R., Mohite N., Pawar V., Sachdeva S.	Artificially Intelligent Decentralized Autonomous Organization	2019	*2019 4th International Conference on Information Systems and Computer Networks, ISCON 2019*	–	667–671
Yan Q., Wang M., Huang W., Luo X., Yu F.R.	Automatically synthesizing DoS attack traces using generative adversarial networks	2019	*International Journal of Machine Learning and Cybernetics*	10,12	3387–3396
Yang K., Chen K., Zhang W., Yu N.	Provably secure generative steganography based on autoregressive model	2019	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	11378 LNCS	55–68
Yang P., Luo F., Chen P., Li L., Yin Z., He X., Sun X.	Knowledgeable storyteller: A commonsense-driven generative model for visual storytelling	2019	*IJCAI International Joint Conference on Artificial Intelligence*	2019–August	5356–5362
Yildirim I., Wu J., Kanwisher N., Tenenbaum J.	An integrative computational architecture for object-driven cortex	2019	*Current Opinion in Neurobiology*	55	73–81
Yu S., Zheng N., Wu H., Du M., Chen B.	Exploring Brain Effective Connectivity in Visual Perception Using a Hierarchical Correlation Network	2019	*IFIP Advances in Information and Communication Technology*	559	223–235
Zhao Z., Ma X.	A compensation method of two-stage image generation for human-ai collaborated in-situ fashion design in augmented reality environment	2019	*Proceedings – 2018 IEEE International Conference on Artificial Intelligence and Virtual Reality, AIVR 2018*	–	76–83
Zhavoronkov A., Mamoshina P., Vanhaelen Q., Scheibye-Knudsen M., Moskalev A., Aliper A.	Artificial intelligence for aging and longevity research: Recent advances and perspectives	2019	*Ageing Research Reviews*	49	49–66
Zhou A.L.	Walking through shanshui: Generating chinese shanshui paintings via real-time tracking of human position	2019	*Proceedings – 2019 International Conference on Computer Vision Workshop, ICCVW 2019*	–	3185–3188
Zhou L., Wang Q.-F., Huang K., Lo C.-H.	An interactive and generative approach for Chinese Shanshui painting document	2019	*Proceedings of the International Conference on Document Analysis and Recognition, ICDAR*	–	819–824
Zhou S., Hu Z., Zhong Z., He D., Jiang M.	An integrated energy system operating scenarios generator based on generative adversarial network	2019	*Sustainability (Switzerland)*	11,23	6699
Zonta A., Smit S.K., Haasdijk E., Eiben A.E.	Modelling Human Movements with Turing Learning	2019	*Proceedings of the 2018 IEEE Symposium Series on Computational Intelligence, SSCI 2018*	–	2254–2261
Agnese J., Herrera J., Tao H., Zhu X.	A survey and taxonomy of adversarial neural networks for text-to-image synthesis	2020	*Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*	10,4	e1345
Aida S., Kameda H., Nishisako S., Kasai T., Sato A., Sugiyama T.	Conditional generative adversarial networks to model iPSC-derived cancer stem cells	2020	*Journal of Advanced Computational Intelligence and Intelligent Informatics*	24,1	134–141
Aida S., Okugawa J., Fujisaka S., Kasai T., Kameda H., Sugiyama T.	Deep learning of cancer stem cell morphology using conditional generative adversarial networks	2020	*Biomolecules*	10,6	1–13
Aliman N.-M., Kester L.	Malicious Design in AIVR, Falsehood and Cybersecurity-oriented Immersive Defenses	2020	*Proceedings – 2020 IEEE International Conference on Artificial Intelligence and Virtual Reality, AIVR 2020*	–	130–137
Angelov P., Soares E.	Towards explainable deep neural networks (xDNN)	2020	*Neural Networks*	130	185–194
Antoniadou E., Belo D., D'Silva K., Wang B., Russell B., Soboczenski F., Martin A., Mackintosh G., Shaw T.	Harnessing artificial intelligence to support astronaut medical care with automated and interpretable diagnosis for cardiac abnormalities in space	2020	*Proceedings of the International Astronautical Congress, IAC*	–	–
Baker A., Perov Y., Middleton K., Baxter J., Mullarkey D., Sangar D., Butt M., DoRosario A., Johri S.	A Comparison of Artificial Intelligence and Human Doctors for the Purpose of Triage and Diagnosis	2020	*Frontiers in Artificial Intelligence*	3	543405
Basso A.	New interpretation tools and metamorphosis of the image, how the self-synthesizing of visual elements influences the aesthetic evolution	2020	*Advances in Intelligent Systems and Computing*	1140	923–935
Belle V., De Raedt L.	Semiring programming: A semantic framework for generalized sum product problems	2020	*International Journal of Approximate Reasoning*	126	181–201
Berrahal M., Azizi M.	Review of DL-Based Generation Techniques of Augmented Images using Portraits Specification	2020	*2020 Fourth International Conference On Intelligent Computing in Data Sciences (ICDS). IEEE*	–	1–8
Bhatia A.	Object detection in conditional GAN transferred sensor images	2020	*Proceedings of SPIE – The International Society for Optical Engineering*	11511	29–38
Botha J., Pieterse H.	Fake news and deepfakes: A dangerous threat for 21st century information security	2020	*Proceedings of the 15th International Conference on Cyber Warfare and Security, ICCWS 2020*	–	57–66
Burger B., Bernathova M., Helbich T., Singer C.F., Langs G.	AI-based prediction of lesion occurrence in high-risk women based on anomalies detected in follow-up examinations	2020	*Proceedings of SPIE – The International Society for Optical Engineering*	11513	184–190
Cai Y.	Safety Analytics for AI Systems	2020	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12424 LNCS	434–448

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Cai Z., Yang Y., Lin L.	Human action recognition and art interaction based on convolutional neural network	2020	*Proceedings – 2020 Chinese Automation Congress, CAC 2020*	–	6112–6116
Caporusso N., Zhang K., Carlson G., Jachetta D., Patchin D., Romeiser S., Vaughn N., Walters A.	User discrimination of content produced by generative adversarial networks	2020	*Advances in Intelligent Systems and Computing*	1018	725–730
Carós M., Garolera M., Radeva P., Giro-I-Nieto X.	Automatic reminiscence therapy for dementia	2020	*ICMR 2020 – Proceedings of the 2020 International Conference on Multimedia Retrieval*		383–387
Chaudhuri A., Talukdar J., Su F., Chakrabarty K.	Functional Criticality Classification of Structural Faults in AI Accelerators	2020	*Proceedings – International Test Conference*	–	1–5
Chen J., Agbodike O., Wang L.	Memory-based deep neural attention (mDNA) for cognitive multi-turn response retrieval in task-oriented chatbots	2020	*Applied Sciences (Switzerland)*	10,17	5819
Chen K., Yi F., Jia J., Zhai G.	Real time Robust Invisible Hyperlinks in Physical Photographs Based on Embodied AI Platform	2020	*Proceedings – 3rd International Conference on Multimedia Information Processing and Retrieval, MIPR 2020*	–	271–274
Chen X., Xie H., Zou D., Hwang G.-J.	Application and theory gaps during the rise of Artificial Intelligence in Education	2020	*Computers and Education: Artificial Intelligence*	1	100002
Chen Y., Lerch A.	Melody-Conditioned Lyrics Generation with SeqGANs	2020	*Proceedings – 2020 IEEE International Symposium on Multimedia, ISM 2020*	–	189–196
Chen Z., Chen L., Zhao Z., Wang Y.	AI Illustrator: Art Illustration Generation Based on Generative Adversarial Network	2020	*2020 IEEE 5th International Conference on Image, Vision and Computing, ICIVC 2020*	–	155–159
Cheng M., Fang F., Pain C.C., Navon I.M.	Data-driven modelling of nonlinear spatio-temporal fluid flows using a deep convolutional generative adversarial network	2020	*Computer Methods in Applied Mechanics and Engineering*	365	113000
Choi S.	Malicious powershell detection using attention against adversarial attacks	2020	*Electronics (Switzerland)*	9,11	1–14
Corcoran P., Javidnia H., Lemley J. E., Varkarakis V.	Generative Augmented Dataset and Annotation Frameworks for Artificial Intelligence (GADAFAI)	2020	*2020 31st Irish Signals and Systems Conference, ISSC 2020*	–	1–6
Cusumano D., Lenkowicz J., Votta C., Boldrini L., Placidi L., Catucci F., Dinapoli N., Antonelli M.V., Romano A., De Luca V., Chiloiro G., Indovina L., Valentini V.	A deep learning approach to generate synthetic CT in low field MR-guided adaptive radiotherapy for abdominal and pelvic cases	2020	*Radiotherapy and Oncology*	153	205–212
Dai J., Wang J., Huang W., Shi J., Zhu Z.	Machinery Health Monitoring Based on Unsupervised Feature Learning via Generative Adversarial Networks	2020	*IEEE/ASME Transactions on Mechatronics*	25,5	2252–2263
de Vries K.	You never fake alone. Creative AI in action	2020	*Information Communication and Society*	23,14	2110–2127
De Waal A., Steyn C.	Uncertainty measurements in neural network predictions for classification tasks	2020	*Proceedings of 2020 23rd International Conference on Information Fusion, FUSION 2020*	–	1–7
Dervakos E., Filandrianos G., Stamou G.	Heuristics for evaluation of AI generated music	2020	*Proceedings – International Conference on Pattern Recognition*	–	9164–9171
Dhariwal M., Dhariwal S.	Let's chance: Playful probabilistic programming for children	2020	*Conference on Human Factors in Computing Systems – Proceedings*	–	1–7
Díaz-Rodríguez N., Pisoni G.	Accessible Cultural Heritage through Explainable Artificial Intelligence	2020	*UMAP 2020 Adjunct – Adjunct Publication of the 28th ACM Conference on User Modeling, Adaptation and Personalization*	–	317–324
Dollens D., Maes A.	Dialectics of nature metabolic architectures meet intelligent guerrilla beehives	2020	*Leonardo*	53,5	563–570
Duan L., Liu J., Yang W., Huang T., Gao W.	Video Coding for Machines: A Paradigm of Collaborative Compression and Intelligent Analytics	2020	*IEEE Transactions on Image Processing*	29	8680–8695
Edraki M., Rahnavard N., Shah M.	SubSpace capsule network	2020	*AAAI 2020 – 34th AAAI Conference on Artificial Intelligence*	–	10745–10753
Eglash R., Robert L., Bennett A., Robinson K.P., Lachney M., Babbitt W.	Automation for the artisanal economy: enhancing the economic and environmental sustainability of crafting professions with human–machine collaboration	2020	*AI and Society*	35,3	595–609
Eisenstadt V., Langenhan C., Althoff K.-D., Dengel A.	Student graduation projects in the context of framework for ai-based support of early conceptual phases in architecture	2020	*CEUR Workshop Proceedings*	2738	174–179
Eshraghian J.K.	Human ownership of artificial creativity	2020	*Nature Machine Intelligence*	2,3	157–160
Esling P., Masuda N., Bardet A., Despres R., Chemla-Romeu-Santos A.	Flow synthesizer: Universal audio synthesizer control with normalizing flows	2020	*Applied Sciences (Switzerland)*	10,1	302
Fang J., Gu X., Tan M.	Fashion-Sketcher: A Model for Producing Fashion Sketches of Multiple Categories	2020	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12306 LNCS	544–556
Fatima N.	AI in Photography: Scrutinizing Implementation of Super-Resolution Techniques in Photo-Editors	2020	*International Conference Image and Vision Computing New Zealand*	–	1–6

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Forbes A.G.	«Creative AI: From Expressive Mimicry to Critical Inquiry» [Ia creativa: De la mímica expresiva a la investigación crítica]	2020	*Artnodes*	2020,26	1–10
Fotedar S., Vannisselroij K., Khalil S., Ploeg B.	Storytelling AI: A generative approach to story narration	2020	*CEUR Workshop Proceedings*	2794,	19–22
Galanter P.	Towards ethical relationships with machines that make art [Hacia una relación ética con las máquinas que generen arte]	2020	*Artnodes*	2020,26	1–9
Gao Y., Liu X., Xiang J.	FEM Simulation-Based Generative Adversarial Networks to Detect Bearing Faults	2020	*IEEE Transactions on Industrial Informatics*	16,7	4961–4971
Ge Q., Huang X., Fang S., Guo S., Liu Y., Lin W., Xiong M.	Conditional Generative Adversarial Networks for Individualized Treatment Effect Estimation and Treatment Selection	2020	*Frontiers in Genetics*	11	585804
George D., Lázaro-Gredilla M., Guntupalli J.S.	From CAPTCHA to Commonsense: How Brain Can Teach Us About Artificial Intelligence	2020	*Frontiers in Computational Neuroscience*	14	554097
Geyer W., Chilton L.B., Kumar R., Kalai A.T.	HAI-GEN 2020:Workshop on human-AI co-creation with generative models	2020	*International Conference on Intelligent User Interfaces, Proceedings IUI*	–	13–14
Geyer W., Chilton L.B., Kumar R., Kalai A.T.	HAI-GEN 2020: Workshop on human-AI co-creation with generative models	2020	*CEUR Workshop Proceedings*	2848	13–14
Goenaga M.A.	A critique of contemporary artificial intelligence art: Who is Edmond de Belamy?	2020	*AusArt*	8,1	49–64
Golany T., Freedman D., Radinsky K.	SimGANs: Simulator-based generative adversarial networks for ECG synthesis to improve deep ECG classification	2020	*37th International Conference on Machine Learning, ICML 2020*	PartF168147–5	3555–3564
Han C., Rundo L., Murao K., Nemoto T., Nakayama H.	Bridging the Gap Between AI and Healthcare Sides: Towards Developing Clinically Relevant AI-Powered Diagnosis Systems	2020	*IFIP Advances in Information and Communication Technology*	584 IFIP	320–333
Harshvardhan GM., Gourisaria M. K., Pandey M., Rautaray S.S.	A comprehensive survey and analysis of generative models in machine learning	2020	*Computer Science Review*	38	100285
Hashmi M.F., Ashish B.K.K., Keskar A.G., Bokde N.D., Geem Z.W.	FashionFit: Analysis of Mapping 3D Pose and Neural Body Fit for Custom Virtual Try-On	2020	*IEEE Access*	8	91603–91615
Hayes J., Gurrin C., Pini A., Keane M.	ADGN20: First workshop on applied deep generative networks	2020	*CEUR Workshop Proceedings*	2692	–
He W.	Urban Experiment: Taking Off on the Wind of Al	2020	*Architectural Design*	90,3	94–99
Hernández-Orallo J.	Twenty Years Beyond the Turing Test: Moving Beyond the Human Judges Too	2020	*Minds and Machines*	30,4	533–562
Hofer D., Ertel W.	Evaluating Person Re-identification Performance on GAN-enhanced Datasets	2020	*ROBOVIS 2020 – Proceedings of the International Conference on Robotics, Computer Vision and Intelligent Systems*	–	77–81
Hong Y., Hou B., Jiang H., Zhang J.	Machine learning and artificial neural network accelerated computational discoveries in materials science	2020	*Wiley Interdisciplinary Reviews: Computational Molecular Science*	10,3	e1450
Houde S., Liao V., Martino J., Muller M., Piorkowski D., Richards J., Weisz J., Zhang Y.	Business (mis)use cases of generative AI	2020	*CEUR Workshop Proceedings*	2848	–
Hyunjin C.	A Study on Application of Generative Design System in Manufacturing Process	2020	*IOP Conference Series: Materials Science and Engineering*	727,1	–
Imtiaz S., Horchidan S.-F., Abbas Z., Arsalan M., Chaudhry H.N., Vlassov V.	Privacy Preserving Time-Series Forecasting of User Health Data Streams	2020	*Proceedings – 2020 IEEE International Conference on Big Data, Big Data 2020*	–	3428–3437
Jamshidi M., Lalbakhsh A., Talla J., Peroutka Z., Hadjilooei F., Lalbakhsh P., Jamshidi M., Spada L.L., Mirmozafari M., Dehghani M., Sabet A., Roshani S., Roshani S., Bayat-Makou N., Mohamadzade B., Malek Z., Jamshidi A., Kiani S., Hashemi-Dezaki H., Mohyuddin W.	Artificial Intelligence and COVID-19: Deep Learning Approaches for Diagnosis and Treatment	2020	*IEEE Access*	8	109581–109595
Jin L., Tan F., Jiang S.	Generative Adversarial Network Technologies and Applications in Computer Vision	2020	*Computational Intelligence and Neuroscience*	2020	–
Jin X., Chen Z., Li W.	AI-GAN: Asynchronous interactive generative adversarial network for single image rain removal	2020	*Pattern Recognition*	100	107143
Kader Mohideen F.P.	A Study on Topology Optimization of Aerospace and Automobile Components	2020	*SAE Technical Papers*	–	–
Kamoi R., Kobayashi K.	Out-of-distribution detection with likelihoods assigned by deep generative models using multimodal prior distributions	2020	*CEUR Workshop Proceedings*	2560	113–116

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Karimi-Bidhendi S., Arafati A., Cheng A.L., Wu Y., Kheradvar A., Jafarkhani H.	Fully-automated deep-learning segmentation of pediatric cardiovascular magnetic resonance of patients with complex congenital heart diseases	2020	*Journal of Cardiovascular Magnetic Resonance*	22,1	80
Kasputis S., Kasputis S.R., Oswalt I.	The potential of using generative adversarial networks in military simulations	2020	*2020 Simulation Innovation Workshop, SIW 2020*	–	–
Katsuyama Y., Yu K., Myint S.H., Sato T., Wen Z., Qi X.	AI-Based W-Band Suspicious Object Detection System for Moving Persons Using GAN: Solutions, Performance Evaluation and Standardization Activities	2020	*2020 ITU Kaleidoscope: Industry–Driven Digital Transformation, ITU K 2020*	–	1–7
Khivasara Y., Khare Y., Bhadane T.	Fake News Detection System using Web-Extension	2020	*2020 IEEE Pune Section International Conference, PuneCon 2020*	–	119–123
Kim H.H.	Test case generation for convolutional neural network	2020	*International Journal of Computing and Digital Systems*	9,2	271–280
Kimura Y., Watanabe A., Yamada T., Watanabe S., Nagaoka T., Nemoto M., Miyazaki K., Hanaoka K., Kaida H., Ishii K.	AI approach of cycle-consistent generative adversarial networks to synthesize PET images to train computer-aided diagnosis algorithm for dementia	2020	*Annals of Nuclear Medicine*	34,7	512–515
Klnll F., Özcan B., Klraç F.	Description-aware Fashion Image Inpainting with Convolutional Neural Networks in Coarse-to-Fine Manner	2020	*ACM International Conference Proceeding Series*	–	74–79
Knotts S., Collins N.	A survey on the uptake of music AI software	2020	*Proceedings of the International Conference on New Interfaces for Musical Expression*	–	499–504
Ko D.H., Hassan A.U., Suk J., Choi J.	Korean Font Synthesis with GANs	2020	*International Journal of Computer Theory and Engineering*	12,4	92–96
Koshiyama A., Firoozye N., Treleaven P.	Algorithms in future capital markets: A survey on AI, ML and associated algorithms in capital markets	2020	*ACM International Conference on AI in Finance 2020*	–	1–8
Koudahl M.T., de Vries B.	A worked example of fokker-planck-based active inference	2020	*Communications in Computer and Information Science*	1326	28–34
Ladwig P., Pech A., Dörner R., Geiger C.	Unmasking Communication Partners: A Low-Cost AI Solution for Digitally Removing Head-Mounted Displays in VR-Based Telepresence	2020	*Proceedings – 2020 IEEE International Conference on Artificial Intelligence and Virtual Reality, AIVR 2020*	–	82–90
Li H., Hu Y., Li S., Lin W., Liu P., Higashita R., Liu J.	CT Scan Synthesis for Promoting Computer-Aided Diagnosis Capacity of COVID-19	2020	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12464 LNCS	413–422
Li H., Lin Y., Mueller K., Xu W.	Interpreting Galaxy Deblender GAN from the Discriminator's Perspective	2020	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12510 LNCS	239–250
Li M., Gou Y., Gong B., Xiao J., Han M.	GAN-based AI Drawing Board for Image Generation and Colorization	2020	*ACM SIGGRAPH 2020 Posters, SIGGRAPH 2020*	–	1–2
Li R., Zhang X., Chen G., Mao Y., Wang X.	Multi-negative samples with Generative Adversarial Networks for image retrieval	2020	*Neurocomputing*	394	146–157
Li S., Li A., Lara D.A.M., Marín J.E. G., Juhas M., Zhang Y.	Transfer Learning for Toxoplasma gondii Recognition	2020	*mSystems*	5,1	–
Lidfeldt A., Isaksson D., Hedlund L., Åberg S., Borg M., Larsson E.	Enabling Image Recognition on Constrained Devices Using Neural Network Pruning and a CycleGAN	2020	*ACM International Conference Proceeding Series*	–	1–14
Lindner F.	Towards a formalization of explanations for robots' actions and beliefs	2020	*CEUR Workshop Proceedings*	2708	–
Liu Y., Lei Y., Wang T., Fu Y., Tang X., Curran W.J., Liu T., Patel P., Yang X.	CBCT-based synthetic CT generation using deep-attention cycleGAN for pancreatic adaptive radiotherapy	2020	*Medical Physics*	47,6	2472–2483
Louie R., Coenen A., Huang C.Z., Terry M., Cai C.J.	Novice-AI Music Co-Creation via AI-Steering Tools for Deep Generative Models	2020	*Conference on Human Factors in Computing Systems – Proceedings*	–	–
Louie R., Coenen A., Huang C.Z., Terry M., Cai C.J.	Cococo: AI-steering tools for music novices co-creating with generative models	2020	*CEUR Workshop Proceedings*	2848	–
Macaya A., Cádiz R.F., Cartagena M., Parra D.	Latent chords: Generative piano chord synthesis with variational autoencoders	2020	*CEUR Workshop Proceedings*	2848	–
Mai C.H., Nakatsu R., Tosa N.	Developing Japanese Ikebana as a Digital Painting Tool via AI	2020	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12523 LNCS	297–307
Mai C.H., Nakatsu R., Tosa N., Kusumi T., Koyamada K.	Learning of Art Style Using AI and Its Evaluation Based on Psychological Experiments	2020	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12523 LNCS	308–316
Maksymyuk T., Gazda J., Ruzicka M., Slapak E., Bugar G., Han L.	Deep Learning based Mobile Network Management for 5G and beyond	2020	*Proceedings – 15th International Conference on Advanced Trends in Radioelectronics, Telecommunications and Computer Engineering, TCSET 2020*	–	890–893
Mendelowitz E.	Intelligent environments and public art [Entornos inteligentes y arte público]	2020	*Artnodes*	2020,26	1–8
Miller D.D., Wood E.A.	AI, autonomous machines and human awareness: Towards shared machine-human contexts in medicine	2020	*Human–Machine Shared Contexts*	–	205–220

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Mirzaei M.S., Meshgi K., Frigo E., Nishida T.	Animgan: A Spatiotemporally-Conditioned Generative Adversarial Network for Character Animation	2020	*Proceedings – International Conference on Image Processing, ICIP*	October	2286–2290
Mutasa S., Varada S., Goel A., Wong T.T., Rasiej M.J.	Advanced Deep Learning Techniques Applied to Automated Femoral Neck Fracture Detection and Classification	2020	*Journal of Digital Imaging*	33,5	1209–1217
Na I.S., Tran C., Nguyen D., Dinh S.	Facial UV map completion for pose-invariant face recognition: a novel adversarial approach based on coupled attention residual UNets	2020	*Human–centric Computing and Information Sciences*	10,1	1–17
Nakane K., Ono R., Yamamoto S., Takada M., Kinoshita F., Sugiura A., Matsuura Y., Fujikake K., Takada H.	Numerical Analysis of Body Sway for Evaluation of 3D Sickness	2020	*15th International Conference on Computer Science and Education, ICCSE 2020*	–	89–95
Nakane K., Takada H., Yamamoto S., Ono R., Takada M.	Numerical analysis of bio-signal using generative adversarial networks	2020	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12427 LNCS	601–613
Nasrin S.S., Rasel R.I.	HennaGAN: Henna Art Design Generation using Deep Convolutional Generative Adversarial Network (DCGAN)	2020	*Proceedings of 2020 IEEE International Women in Engineering (WIE) Conference on Electrical and Computer Engineering, WIECON–ECE 2020*	–	196–199
Ngo H., Fang H., Wang H.	Deep Learning-based Adaptive Beamforming for mmWave Wireless Body Area Network	2020	*2020 IEEE Global Communications Conference, GLOBECOM 2020 – Proceedings*	–	1–6
Nguyen K.-T., Dinh D.-T., Do M.N., Tran M.-T.	Anomaly detection in traffic surveillance videos with GAN-based future frame prediction	2020	*ICMR 2020 – Proceedings of the 2020 International Conference on Multimedia Retrieval*	–	457–463
Palamara J., Deal W.S.	A Dynamic Representation Solution for Machine Learning-Aided Performance Technology	2020	*Frontiers in Artificial Intelligence*	3	29
Panagiotou E., Chochlakis G., Grammatikopoulos L., Charou E.	Generating elevation surface from a single RGB remotely sensed image using deep learning	2020	*Remote Sensing*	12,12	–
Partadiredja R.A., Serrano C.E., Ljubenkov D.	AI or human: The socio-ethical implications of ai-generated media content	2020	*13th CMI Conference on Cybersecurity and Privacy – Digital Transformation – Potentials and Challenges, CMI 2020*	–	1–6
Patel M., Gupta A., Tanwar S., Obaidat M.S.	Trans-DF: A Transfer Learning-based end-to-end Deepfake Detector	2020	*2020 IEEE 5th International Conference on Computing Communication and Automation, ICCCA 2020*	–	796–801
Patil S.O., Sajith Variyar V.V., Soman K.P.	Speed Bump Segmentation an Application of Conditional Generative Adversarial Network for Self-driving Vehicles	2020	*Proceedings of the 4th International Conference on Computing Methodologies and Communication, ICCMC 2020*	–	935–939
Peng Y., Ciesielski V.	Stylised Image Generation from Deep Neural Networks	2020	*Proceedings of the International Joint Conference on Neural Networks*	–	1–8
Pini A.	TravelGANs. A design approach to style transfer	2020	*CEUR Workshop Proceedings*	2692	–
Plut C., Pasquier P.	Generative music in video games: State of the art, challenges, and prospects	2020	*Entertainment Computing*	33	–
Pošćić A., Kreković G.	On the human role in generative art: A case study of ai-driven live coding	2020	*Journal of Science and Technology of the Arts*	12,3	45–62
Qarout Y., Raykov Y.P., Little M.A.	Probabilistic modelling for unsupervised analysis of human behaviour in smart cities	2020	*Sensors (Switzerland)*	20,3	784
Ragot M., Martin N., Cojean S.	AI-generated vs. human artworks. a perception bias towards artificial intelligence?	2020	*Conference on Human Factors in Computing Systems – Proceedings*	–	1–10
Ristoski P., Zubarev D.Y., Gentile A.L., Park N., Sanders D., Gruhl D., Kato L., Welch S.	Expert-in-the-loop AI for Polymer Discovery	2020	*International Conference on Information and Knowledge Management, Proceedings*	–	2701–2708
Rudinger R., Shwartz V., Hwang J. D., Bhagavatula C., Forbes M., Le Bras R., Smith N.A., Choi Y.	Thinking like a skeptic: Defeasible inference in natural language	2020	*Findings of the Association for Computational Linguistics Findings of ACL: EMNLP 2020*	–	4661–4675
Rupprecht C., Ibrahim C., Pal C.J.	FINDING AND VISUALIZING WEAKNESSES OF DEEP REINFORCEMENT LEARNING AGENTS	2020	*8th International Conference on Learning Representations, ICLR 2020*	–	–
Safron A.	An Integrated World Modeling Theory (IWMT) of Consciousness: Combining Integrated Information and Global Neuronal Workspace Theories With the Free Energy Principle and Active Inference Framework; Toward Solving the Hard Problem and Characterizing Agentic Causation	2020	*Frontiers in Artificial Intelligence*	3	30
Sakamoto T., Furukawa T., Lami K., Pham H.H.N., Uegami W., Kuroda K., Kawai M., Sakanashi H., Cooper L.A.D., Bychkov A., Fukuoka J.	A narrative review of digital pathology and artificial intelligence: Focusing on lung cancer	2020	*Translational Lung Cancer Research*	9,5	2255–2276

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Salge C., Green M.C., Canaan R., Skwarski F., Fritsch R., Brightmoore A., Ye S., Cao C., Togelius J.	The AI Settlement Generation Challenge in Minecraft: First Year Report	2020	*KI – Kunstliche Intelligenz*	34,1	19–31
Shahriar M.H., Haque N.I., Rahman M.A., Alonso M.	G-IDS: Generative Adversarial Networks Assisted Intrusion Detection System	2020	*Proceedings – 2020 IEEE 44th Annual Computers, Software, and Applications Conference, COMPSAC 2020*	–	376–385
She J., Ng C., Sheng W.	Keep Running-AI Paintings of Horse Figure and Portrait	2020	*MM 2020 – Proceedings of the 28th ACM International Conference on Multimedia*	–	4403–4404
Shin G., Moon Y.-J., Park E., Jeong H., Lee H., Bae S.-H.	Generation of High-resolution Solar Pseudo-magnetograms from Ca ii K Images by Deep Learning	2020	*Astrophysical Journal Letters*	895,1	–
Sinaga M.A., Stefanus L.Y.	Least square adversarial autoencoder	2020	*2020 International Conference on Advanced Computer Science and Information Systems (ICACSIS)*	–	33–40
Song M., Wang Z., Zhang Z., Song Y., Wang Q., Ren J., Qi H.	Analyzing User-Level Privacy Attack against Federated Learning	2020	*IEEE Journal on Selected Areas in Communications*	38,10	2430–2444
Sruthi K.V., Meharban M.S.	Review on Image Captioning and Speech Synthesis Techniques	2020	*2020 6th International Conference on Advanced Computing and Communication Systems (ICACCS)*	–	352–356
Stojanovski T., Partanen J., Samuels I., Sanders P., Peters C.	Viewpoint: City Information Modelling (CIM) and Digitizing Urban Design Practices	2020	*Built Environment*	46,4	637–646
Sturm N., Mayr A., Le Van T., Chupakhin V., Ceulemans H., Wegner J., Golib-Dzib J.-F., Jeliazkova N., Vandriessche Y., Böhm S., Cima V., Martinovic J., Greene N., Vander Aa T., Ashby T.J., Hochreiter S., Engkvist O., Klambauer G., Chen H.	Industry-scale application and evaluation of deep learning for drug target prediction	2020	*Journal of Cheminformatics*	12,1	1–13
Such F.P., Rawal A., Lehman J., Stanley K.O., Clune J.	Generative teaching networks: Accelerating neural architecture search by learning to generate synthetic training data	2020	*37th International Conference on Machine Learning, ICML 2020*	PartF168147–12	9143–9153
Sultan A.S., Elgharib M.A., Tavares T., Jessri M., Basile J.R.	The use of artificial intelligence, machine learning and deep learning in oncologic histopathology	2020	*Journal of Oral Pathology and Medicine*	49,9	849–856
Suratkar S., Kazi F., Sakhalkar M., Abhyankar N., Kshirsagar M.	Exposing DeepFakes Using Convolutional Neural Networks and Transfer Learning Approaches	2020	*2020 IEEE 17th India Council International Conference, INDICON 2020*	–	–
Takeda S., Hama T., Hsu H.-H., Piunova V.A., Zubarev D., Sanders D.P., Pitera J.W., Kogoh M., Hongo T., Cheng Y., Bocanett W., Nakashika H., Fujita A., Tsuchiya Y., Hino K., Yano K., Hirose S., Toda H., Orii Y., Nakano D.	Molecular Inverse-Design Platform for Material Industries	2020	*Proceedings of the ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*	–	2961–2969
Teira-Lafuente J., Gil-González A. B., de Luis Reboredo A.	Philosophical approaches to smart education and smart cities	2020	*Advances in Intelligent Systems and Computing*	1241 AISC	239–248
Toma A., Krayani A., Farrukh M., Qi H., Marcenaro L., Gao Y., Regazzoni C.S.	AI-Based Abnormality Detection at the PHY-Layer of Cognitive Radio by Learning Generative Models	2020	*IEEE Transactions on Cognitive Communications and Networking*	6,1	21–34
Tong X., Wang L., Pan X., Wang J. G.	An Overview of Deepfake: The Sword of Damocles in AI	2020	*Proceedings – 2020 International Conference on Computer Vision, Image and Deep Learning, CVIDL 2020*	–	265–273
Uzun C., Çolakoğlu M.B., İnceoğlu A.	GAN as a generative architectural plan layout tool: A case study for training DCGAN with palladian plans and evaluation of DCGAN outputs	2020	*A/Z ITU Journal of the Faculty of Architecture*	17,2	185–198
Vakratsas D., Wang X.	Artificial Intelligence in Advertising Creativity	2020	*Journal of Advertising*	50,1	39–51
Vamsi G.K., Rasool A., Hajela G.	Chatbot: A Deep Neural Network Based Human to Machine Conversation Model	2020	*2020 11th International Conference on Computing, Communication and Networking Technologies, ICCCNT 2020*	–	1–7
Van Deursen R., Ertl P., Tetko I.V., Godin G.	GEN: Highly efficient SMILES explorer using autodidactic generative examination networks	2020	*Journal of Cheminformatics*	12,1	1–14
Vanhaelen Q., Lin Y.-C., Zhavoronkov A.	The Advent of Generative Chemistry	2020	*ACS Medicinal Chemistry Letters*	11,8	1496–1505
Vellakani S., Pushbam I.	An enhanced OCT image captioning system to assist ophthalmologists in detecting and classifying eye diseases	2020	*Journal of X–Ray Science and Technology*	28,5	975–988
Verma D.C., Bertino E., Russo A., Calo S., Singla A.	Policy-based ensembles for multi domain operations	2020	*Proceedings of SPIE – The International Society for Optical Engineering*	11413	48–56
Vishwanath S., Saxena M.	Key Concepts of the Future of Artificial Intelligence	2020	*Intelligence–Based Medicine: Artificial Intelligence and Human Cognition in Clinical Medicine and Healthcare*	–	415–430
Wang C., Xu C., Tao D.	Self-Supervised Pose Adaptation for Cross-Domain Image Animation	2020	*IEEE Transactions on Artificial Intelligence*	1,1	34–46

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Wang M., Lu H., Liu S., Zhu Z.	How to mislead AI-assisted network automation in Sd-ipoeons: A comparison study of DRL- And GaN-based approaches	2020	*Journal of Lightwave Technology*	38,20	5574–5585
Wang R., Juefei-Xu F., Ma L., Xie X., Huang Y., Wang J., Liu Y.	FakeSpotter: A simple yet robust baseline for spotting AI-synthesized fake faces	2020	*IJCAI International Joint Conference on Artificial Intelligence*	January	3444–3451
Wang Y., Wang H., Wei L., Li S., Liu L., Wang X.	Synthetic promoter design in Escherichia coli based on a deep generative network	2020	*Nucleic Acids Research*	48,12	6403–6412
Wang Z., Healy G., Smeaton A.F., Ward T.E.	Use of Neural Signals to Evaluate the Quality of Generative Adversarial Network Performance in Facial Image Generation	2020	*Cognitive Computation*	12,1	13–24
Wang Z., She Q., Smeaton A.F., Ward T.E., Healy G.	Synthetic-Neuroscore: Using a neuro-AI interface for evaluating generative adversarial networks	2020	*Neurocomputing*	405	26–36
West R., Burbano A.	Ai, arts & design: Questioning learning machines [Ia, arte y diseño: Cuestionando el aprendizaje automático]	2020	*Artnodes*	2020,26	1–9
Williams D., Hodge V.J., Wu C.-Y.	On the use of AI for Generation of Functional Music to Improve Mental Health	2020	*Frontiers in Artificial Intelligence*	3	–
Xiao Y., Shi G., Li Y., Saad W., Poor H.V.	Toward Self-Learning Edge Intelligence in 6G	2020	*IEEE Communications Magazine*	58,12	34–40
Yan K., Chong A., Mo Y.	Generative adversarial network for fault detection diagnosis of chillers	2020	*Building and Environment*	172	–
Yazici S.	A machine-learning model driven by geometry, material and structural performance data in architectural design process	2020	*Proceedings of the International Conference on Education and Research in Computer Aided Architectural Design in Europe*	1	411–418
Yi H.	Visualized co-simulation of adaptive human behavior and dynamic building performance: An agent-based model (ABM) and artificial intelligence (AI) approach for smart architectural design	2020	*Sustainability (Switzerland)*	12,16	6672
Yin X.-X., Yin L., Hadjiloucas S.	Pattern classification approaches for breast cancer identification via MRI: State-of-the-art and vision for the future	2020	*Applied Sciences (Switzerland)*	10,20	1–25
Yogeeshwar S., Vishwath Kumar B. S., Guruviah V., Sethuraman T. V.	Deep Generative Model based Channel Agnostic Communication System for Efficient Data Transmission	2020	*2020 IEEE International Conference on Communication, Networks and Satellite, Comnetsat 2020 – Proceedings*	–	373–379
Yoon J., Drumright L.N., Van Der Schaar M.	Anonymization through data synthesis using generative adversarial networks (ADS-GAN)	2020	*IEEE Journal of Biomedical and Health Informatics*	24,8	2378–2388
Yoon J., Lee H.	RUEGAN: Embracing a Self-Adversarial Agent for Building a Defensible Edge Security Architecture	2020	*Proceedings – IEEE INFOCOM*	July	904–913
Yu Q., Malaeb J., Ma W.	Architectural Facade Recognition and Generation through Generative Adversarial Networks	2020	*Proceedings – 2020 International Conference on Big Data and Artificial Intelligence and Software Engineering, ICBASE 2020*	–	310–316
Yu Y., Harscoët F., Canales S., Reddy M G., Tang S., Jiang J.	Lyrics-Conditioned Neural Melody Generation	2020	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	11962 LNCS	709–714
Zhang C., Wang J., Yen G.G., Zhao C., Sun Q., Tang Y., Qian F., Kurths J.	When Autonomous Systems Meet Accuracy and Transferability through AI: A Survey	2020	*Patterns*	1,4	–
Zhang S., Wang L., Zhang J., Gu L., Jiang X., Zhai X., Sha X., Chang S.	Consecutive context perceive generative adversarial networks for serial sections inpainting	2020	*IEEE Access*	8	190417–190430
Zhang Z., Seeram E.	The use of artificial intelligence in computed tomography image reconstruction - A literature review	2020	*Journal of Medical Imaging and Radiation Sciences*	51,4	671–677
Zhavoronkov A., Vanhaelen Q., Oprea T.I.	Will Artificial Intelligence for Drug Discovery Impact Clinical Pharmacology?	2020	*Clinical Pharmacology and Therapeutics*	107,4	780–785
Zheng X., Yang C., Feng J., Xu C., Wang Z.	Generative Adversarial Method Considering Communication Transmission Distortion for Neural Network Codec	2020	*IEEE Vehicular Technology Conference*	–	1–5
Abrishami S., Goulding J., Rahimian F.	Generative BIM workspace for AEC conceptual design automation: prototype development	2021	*Engineering, Construction and Architectural Management*	28,2	482–509
Agarwal H., Singh A., Rajeswari D.	Deepfake Detection Using SVM	2021		–	1245–1249
Al Hasan M.M., Vashistha N., Taheri S., Tehranipoor M., Asadizanjani N.	Generative Adversarial Network for Integrated Circuits Physical Assurance Using Scanning Electron Microscopy	2021	*Proceedings of the International Symposium on the Physical and Failure Analysis of Integrated Circuits, IPFA*	–	1–12
Al-Ameer A., Al-Sunni F.	A Methodology for Securities and Cryptocurrency Trading Using Exploratory Data Analysis and Artificial Intelligence	2021	*2021 1st International Conference on Artificial Intelligence and Data Analytics, CAIDA 2021*	–	54–61
Aldausari N., Sowmya A., Marcus N., Mohammadi G.	PhonicsGAN: Synthesizing Graphical Videos from Phonics Songs	2021	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12892 LNCS	599–610

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Aleksandr F., Qi Y., Andrey F., Lepikhin K., Chu-Farseeva Y.-Y., Loo D.-B.	SoMin.ai: Personality-Driven Content Generation Platform	2021	*WSDM 2021 – Proceedings of the 14th ACM International Conference on Web Search and Data Mining*	–	890–893
Ali S., DiPaola D., Breazeal C.	What are GANs?: Introducing Generative Adversarial Networks to Middle School Students	2021	*35th AAAI Conference on Artificial Intelligence, AAAI 2021*	17B	15472–15479
Ali S., DiPaola D., Lee I., Hong J., Breazeal C.	Exploring generative models with middle school students	2021	*Conference on Human Factors in Computing Systems – Proceedings*	–	1–13
Ali S., DiPaola D., Lee I., Sindato V., Kim G., Blumofe R., Breazeal C.	Children as creators, thinkers and citizens in an AI-driven future	2021	*Computers and Education: Artificial Intelligence*	2	–
Altakrouri S., Usman S.B., Ahmad N.B., Justinia T., Noor N.M.	Image to Image Translation Networks using Perceptual Adversarial Loss Function	2021	*Proceedings of the 2021 IEEE International Conference on Signal and Image Processing Applications, ICSIPA 2021*	–	89–94
Asadi F., O'reilly J.A.	Artificial Computed Tomography Images with Progressively Growing Generative Adversarial Network	2021	*BMEiCON 2021 – 13th Biomedical Engineering International Conference*	–	1–5
Asperti A., Evangelista D., Loli Piccolomini E.	A Survey on Variational Autoencoders from a Green AI Perspective	2021	*SN Computer Science*	2,4	301
Atouani A., Kirchhof J.C., Kusmenko E., Rumpe B.	Artifact and reference models for generative machine learning frameworks and build systems	2021	*GPCE 2021 – Proceedings of the 20th ACM SIGPLAN International Conference on Generative Programming: Concepts and Experiences, co–located with SPLASH 2021*	–	55–68
Bai J., Posner R., Wang T., Yang C., Nabavi S.	Applying deep learning in digital breast tomosynthesis for automatic breast cancer detection: A review	2021	*Medical Image Analysis*	71	102049
Bai T., Zhao J., Zhu J., Han S., Chen J., Li B., Kot A.	AI-GAN: ATTACK-INSPIRED GENERATION OF ADVERSARIAL EXAMPLES	2021	*Proceedings – International Conference on Image Processing, ICIP*	September	2543–2547
Bannigan P., Aldeghi M., Bao Z., Häse F., Aspuru-Guzik A., Allen C.	Machine learning directed drug formulation development	2021	*Advanced Drug Delivery Reviews*	175	113806
Barbalau A., Cosma A., Ionescu R. T., Popescu M.	A Generic and Model-Agnostic Exemplar Synthetization Framework for Explainable AI	2021	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12458 LNAI,	190–205
Barbiero P., Viñas Torné R., Lió P.	Graph Representation Forecasting of Patient's Medical Conditions: Toward a Digital Twin	2021	*Frontiers in Genetics*	12	652907
Barshatski G., Radinsky K.	Unpaired Generative Molecule-to-Molecule Translation for Lead Optimization	2021	*Proceedings of the ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*	–	2554–2564
Batra R., Song L., Ramprasad R.	Emerging materials intelligence ecosystems propelled by machine learning	2021	*Nature Reviews Materials*	6,8	655–678
Bavikadi S., Sutradhar P.R., Ganguly A., Dinakarrao S.M.P.	UPIM: Performance-aware Online Learning Capable Processing-in-Memory	2021	*2021 IEEE 3rd International Conference on Artificial Intelligence Circuits and Systems, AICAS 2021*	–	1–4
Behera S., Misra R.	Generative adversarial networks based remaining useful life estimation for IIoT	2021	*Computers and Electrical Engineering*	92	107195
Bernal G., Montgomery S.M., Maes P.	Brain-Computer Interfaces, Open-Source, and Democratizing the Future of Augmented Consciousness	2021	*Frontiers in Computer Science*	3	661300
Bontrager P., Togelius J.	Learning to Generate Levels from Nothing	2021	*IEEE Conference on Computatonal Intelligence and Games, CIG*	–	1–8
Bort W., Baskin I.I., Gimadiev T., Mukanov A., Nugmanov R., Sidorov P., Marcou G., Horvath D., Klimchuk O., Madzhidov T., Varnek A.	Discovery of novel chemical reactions by deep generative recurrent neural network	2021	*Scientific Reports*	11,1	3178
Bratton B.	AI urbanism: a design framework for governance, program, and platform cognition	2021	*AI and Society*	36,4	1307–1312
Burlina P., Joshi N., Paul W., Pacheco K.D., Bressler N.M.	Addressing artificial intelligence bias in retinal diagnostics	2021	*Translational Vision Science and Technology*	10,2	1–13
Buschek D., Mecke L., Lehmann F., Dang H.	Nine Potential Pitfalls when Designing Human-AI Co-Creative Systems	2021	*CEUR Workshop Proceedings*	2903	–
Bushra S.N., Ali L.J.	A Review on Fuzzy Face Recognition (FFR) using DCGAN	2021	*Proceedings – 5th International Conference on Computing Methodologies and Communication, ICCMC 2021*		1299–1305
Butz M.V.	Towards Strong AI	2021	*KI – Kunstliche Intelligenz*	35,1	91–101
Cai Y., Zimek A., Ntoutsi E.	XPROAX-Local explanations for text classification with progressive neighborhood approximation	2021	*2021 IEEE 8th International Conference on Data Science and Advanced Analytics, DSAA 2021*	–	1–10
Campo M.D.	ARchitecture, language and AI: Language, attentional generative adversarial networks (Attngan) and architecture design	2021	*Projections – Proceedings of the 26th International Conference of the Association for Computer–Aided Architectural Design Research in Asia, CAADRIA 2021*	1	211–220
Celiktutan O., Georgescu A.L., Cummins N.	Socially Informed AI for Healthcare: Understanding and Generating Multimodal Nonverbal Cues	2021	*ICMI 2021 – Proceedings of the 2021 International Conference on Multimodal Interaction*		874–876

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Chacón J.C., Nimi H.M., Kloss B., Kenta O.	Towards the Development of AI Based Generative Design Tools and Applications	2021	*Lecture Notes of the Institute for Computer Sciences, Social–Informatics and Telecommunications Engineering, LNICST*	366	63–73
Champion T., Grześ M., Bowman H.	Realizing active inference in variational message passing: The outcome-blind certainty seeker	2021	*Neural Computation*	33,10	2762–2826
Chan S., Krunz M., Griffin B.	Ai-based robust convex relaxations for supporting diverse qos in next-generation wireless systems	2021	*Proceedings – 2021 IEEE 41st International Conference on Distributed Computing Systems Workshops, ICDCSW 2021*	–	41–48
Chaturvedi V., de Vries W.T.	Machine Learning Algorithms for Urban Land Use Planning: A Review	2021	*Urban Science*	5,3	–
Che T., Liu X., Li S., Ge Y., Zhang R., Xiong C., Bengio Y.	Deep Verifier Networks: Verification of Deep Discriminative Models with Deep Generative Models	2021	*35th AAAI Conference on Artificial Intelligence, AAAI 2021*	8B	7002–7010
Cheng M., Li Y., Nazarian S., Bogdan P.	From rumor to genetic mutation detection with explanations: a GAN approach	2021	*Scientific Reports*	11,1	5861
Cho S.W., Baek N.R., Koo J.H., Park K.R.	Modified Perceptual Cycle Generative Adversarial Network-Based Image Enhancement for Improving Accuracy of Low Light Image Segmentation	2021	*IEEE Access*	9	6296–6324
Chopra S.	Virtual Control Panel API: An Artificial Intelligence Driven Directive to Allow Programmers and Users to Create Customizable, Modular, and Virtual Control Panels and Systems to Control IoT Devices via Augmented Reality	2021	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13095 LNCS	391–400
Cirillo D., Núñez-Carpintero I., Valencia A.	Artificial intelligence in cancer research: learning at different levels of data granularity	2021	*Molecular Oncology*	15,4	817–829
Cousins S.	AI TAKES ON CITY DESIGN	2021	*Engineering and Technology*	16,11	34–37
Cruz A.P., Tamilselvi P.	Auto-photo creator-a system for image generation and text imposing using voice information	2021	*AIP Conference Proceedings*	2408	30001
Cummings P., Mullins R., Moquete M., Schurr N.	Hello World! I am Charlie, an artificially intelligent conference panelist	2021	*Proceedings of the Annual Hawaii International Conference on System Sciences*	2020–January	380–389
Danchenko E.	The AI-teration Method and the Role of AI in Architectural Design	2021	*Advances in Intelligent Systems and Computing*	1288	525–538
Das P., Sercu T., Wadhawan K., Padhi I., Gehrmann S., Cipcigan F., Chenthamarakshan V., Strobelt H., dos Santos C., Chen P.-Y., Yang Y.Y., Tan J.P.K., Hedrick J., Crain J., Mojsilovic A.	Accelerated antimicrobial discovery via deep generative models and molecular dynamics simulations (Nature Biomedical Engineering, (2021), 5, 6, (613-623), 10.1038/s41551-021-00689-x)	2021	*Nature Biomedical Engineering*	5,8	613–623
Day M.-Y., Shaw S.-R.	AI Customer Service System with Pre-trained Language and Response Ranking Models for University Admissions	2021	*Proceedings – 2021 IEEE 22nd International Conference on Information Reuse and Integration for Data Science, IRI 2021*	–	395–401
Demir I., Ciftci U.A.	Where Do Deep Fakes Look? Synthetic Face Detection via Gaze Tracking	2021	*Eye Tracking Research and Applications Symposium (ETRA)*	–	1–11
Denck J., Guehring J., Maier A., Rothgang E.	MR-contrast-aware image-to-image translations with generative adversarial networks	2021	*International Journal of Computer Assisted Radiology and Surgery*	16,12	2069–2078
Denck J., Guehring J., Maier A., Rothgang E.	Enhanced magnetic resonance image synthesis with contrast-aware generative adversarial networks	2021	*Journal of Imaging*	7,8	133
Desai P., Sujatha C., Shanbhag R., Gotur R., Hebbar R., Kurtkoti P.	Adversarial Network for Photographic Image Synthesis from Fine-grained Captions	2021	*2021 International Conference on Intelligent Technologies, CONIT 2021*	–	1–5
Devaraj J., Madurai Elavarasan R., Shafiullah G.M., Jamal T., Khan I.	A holistic review on energy forecasting using big data and deep learning models	2021	*International Journal of Energy Research*	45,9	13489–13530
Dilibal C., Davis B.L., Chakraborty C.	Generative Design Methodology for Internet of Medical Things (IoMT)-based Wearable Biomedical Devices	2021	*HORA 2021 – 3rd International Congress on Human–Computer Interaction, Optimization and Robotic Applications, Proceedings*	–	1–4
Doboli A., Doboli S.	A Novel Learning and Response Generating Agent-based Model for Symbolic - Numeric Knowledge Modeling and Combination	2021	*2021 IEEE Symposium Series on Computational Intelligence, SSCI 2021 – Proceedings*	–	1–9
Elias R., Issa R.R.A.	Artificial-Neural-Network-Based Model for Predicting Heating and Cooling Loads on Residential Buildings	2021	*Computing in Civil Engineering 2021*	–	140–147
Erliksson K.F., Arpteg A., Matskin M., Payberah A.H.	Cross-Domain Transfer of Generative Explanations Using Text-to-Text Models	2021	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12801 LNCS	76–89
Etheredge R.I., Schartl M., Jordan A.	Decontextualized learning for interpretable hierarchical representations of visual patterns	2021	*Patterns*	2,2	100193

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Figetakis E., Refaey A.	UAV Path Planning Using on-Board Ultrasound Transducer Arrays and Edge Support	2021	*2021 IEEE International Conference on Communications Workshops, ICC Workshops 2021 – Proceedings*	–	1–6
Fishman S.A.	Between Technological and Aesthetic Grids: Philosophical Challenges Posed by AI Artists	2021	*The Arts of the Grid: Interdisciplinary Insights on Gridded Modalities in Conversation with the Arts*	–	84–96
Flokas L., Vlatakis-Gkaragkounis E.V., Piliouras G.	Solving Min-Max Optimization with Hidden Structure via Gradient Descent Ascent	2021	*Advances in Neural Information Processing Systems*	4	2373–2386
Friedman D., Pollak D.	Image Co-Creation by Non-Programmers and Generative Adversarial Networks	2021	*CEUR Workshop Proceedings*	2903	–
Frye C., de Mijolla D., Begley T., Cowton L., Stanley M., Feige I.	SHAPLEY EXPLAINABILITY ON THE DATA MANIFOLD	2021	*ICLR 2021 – 9th International Conference on Learning Representations*	–	–
Galdon F., Hall A., Ferrarelo L.	ENHANCING ABDUCTIVE REASONING in DESIGN and ENGINEERING EDUCATION VIA PROBABILISTIC KNOWLEDGE; A CASE STUDY in AI	2021	*Proceedings of the 23rd International Conference on Engineering and Product Design Education, E and PDE 2021*	–	–
Gallego V., Naveiro R., Roca C., Ríos Insua D., Campillo N.E.	AI in drug development: a multidisciplinary perspective	2021	*Molecular Diversity*	25,3	1461–1479
Gantala T., Balasubramaniam K.	Automated Defect Recognition for Welds Using Simulation Assisted TFM Imaging with Artificial Intelligence	2021	*Journal of Nondestructive Evaluation*	40,1	28
Gao T., Li J., Watanabe Y., Hung C., Yamanaka A., Horie K., Yanagisawa M., Ohsawa M., Kume K.	GI-SleepNet: A Highly Versatile Image-Based Sleep Classification Using a Deep Learning Algorithm	2021	*Clocks and Sleep*	3,4	581–597
Gao Y., Liu X., Huang H., Xiang J.	A hybrid of FEM simulations and generative adversarial networks to classify faults in rotor-bearing systems	2021	*ISA Transactions*	108	356–366
Garozzo R., Santagati C., Spampinato C., Vecchio G.	Knowledge-based generative adversarial networks for scene understanding in Cultural Heritage	2021	*Journal of Archaeological Science: Reports*	35	102736
Geyer W., Chilton L.B., Weisz J.D., Maher M.L.	HAI-GEN 2021: 2nd workshop on human-AI co-creation with generative models	2021	*International Conference on Intelligent User Interfaces, Proceedings IUI*	–	15–17
Ghosh A., Goswami K., Chatterjee R., Sarkar P.	A Light SRGAN for Up-Scaling of Low Resolution and High Latency Images	2021	*Communications in Computer and Information Science*	1440 CCIS	56–67
Gibas C., Pöhler J., Brück R., Van Laerhoven K.	Simulation and evaluation of imaging for electrical impedance tomography using artificial intelligence methods	2021	*Progress in Biomedical Optics and Imaging – Proceedings of SPIE*	11600	116001S
Gillick J., Bamman D.	What to Play and How to Play it: Guiding Generative Music Models with Multiple Demonstrations	2021	*Proceedings of the International Conference on New Interfaces for Musical Expression*	–	–
Giudice O., Guarnera L., Battiato S.	Fighting deepfakes by detecting gan dct anomalies	2021	*Journal of Imaging*	7,8	–
Goetschalckx L., Andonian A., Wagemans J.	Generative adversarial networks unlock new methods for cognitive science	2021	*Trends in Cognitive Sciences*	25,9	788–801
Gomi T., Sakai R., Hara H., Watanabe Y., Mizukami S.	Usefulness of a metal artifact reduction algorithm in digital tomosynthesis using a combination of hybrid generative adversarial networks	2021	*Diagnostics*	11,9	–
Guadamuz A.	Do androids dream of electric copyright? Comparative analysis of originality in artificial intelligence generated works	2021	*Artificial Intelligence and Intellectual Property*	–	147–176
Gunser V.E., Gottschling S., Brucker B., Richter S., Gerjets P.	Can Users Distinguish Narrative Texts Written by an Artificial Intelligence Writing Tool from Purely Human Text?	2021	*Communications in Computer and Information Science*	1419	520–527
Gurnani R., Kamal D., Tran H., Sahu H., Scharm K., Ashraf U., Ramprasad R.	PolyG2G: A Novel Machine Learning Algorithm Applied to the Generative Design of Polymer Dielectrics	2021	*Chemistry of Materials*	33,17	7008–7016
Gurunath R., Alahmadi A.H., Samanta D., Khan M.Z., Alahmadi A.	A Novel Approach for Linguistic Steganography Evaluation Based on Artificial Neural Networks	2021	*IEEE Access*	9	120869–120879
Habuza T., Navaz A.N., Hashim F., Alnajjar F., Zaki N., Serhani M. A., Statsenko Y.	AI applications in robotics, diagnostic image analysis and precision medicine: Current limitations, future trends, guidelines on CAD systems for medicine	2021	*Informatics in Medicine Unlocked*	24	–
Hamdi A., Chan Y.K., Koo V.C.	A New Image Enhancement and Super Resolution technique for license plate recognition	2021	*Heliyon*	7,11	–
Hashimoto R., Itaya T., Nishimura H., Fukuchi S., Kato H., Ito J., Nakagawa K.	Nondestructive inspection technology for plant steel structures using magneto-optical images using deep generative models	2021	*ICIIBMS 2021 – 6th International Conference on Intelligent Informatics and Biomedical Sciences*	–	10–15
Helliwell A.C.	Darwinian creativity as a model for computational creativity	2021	*AISB Convention 2021: Communication and Conversations*	–	
Hernández-Orozco S., Zenil H., Riedel J., Uccello A., Kiani N.A., Tegnér J.	Algorithmic Probability-Guided Machine Learning on Non-Differentiable Spaces	2021	*Frontiers in Artificial Intelligence*	3	–

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Hofmann P., Rückel T., Urbach N.	Innovating with artificial intelligence: Capturing the constructive functional capabilities of deep generative learning	2021	*Proceedings of the Annual Hawaii International Conference on System Sciences*	January	5505–5514
Hong D.-S., Baik C.	Generating and Validating Synthetic Training Data for Predicting Bankruptcy of Individual Businesses	2021	*Journal of Information and Communication Convergence Engineering*	19,4	228–233
Hong L., Lamberson P.J., Page S.E.	Hybrid predictive ensembles: Synergies between human and computational forecasts	2021	*Journal of Social Computing*	2,2	89–102
Hsu Y.-C., Yu C.-H., Buehler M.J.	Tuning Mechanical Properties in Polycrystalline Solids Using a Deep Generative Framework	2021	*Advanced Engineering Materials*	23,4	–
Hu K., Wu J., Weng L., Zhang Y., Zheng F., Pang Z., Xia M.	A novel federated learning approach based on the confidence of federated Kalman filters	2021	*International Journal of Machine Learning and Cybernetics*	12,12	3607–3627
Huang W.	Shaping AI as the Tool for Subconscious Design	2021	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13094 LNCS	40–53
Huang Y., Khan S.M.	Advances in AI and Machine Learning for Education Research	2021	*Methodology of Educational Measurement and Assessment*	–	195–208
Huang Y., Liu B., Fu J., Lu Y.	A Picture is Worth a Thousand Words: A Unified System for Diverse Captions and Rich Images Generation	2021	*MM 2021 – Proceedings of the 29th ACM International Conference on Multimedia*	–	2792–2794
Hughes R.T., Zhu L., Bednarz T.	Generative Adversarial Networks–Enabled Human–Artificial Intelligence Collaborative Applications for Creative and Design Industries: A Systematic Review of Current Approaches and Trends	2021	*Frontiers in Artificial Intelligence*	4	–
Huynh V., Phung D., Zhao H.	Optimal Transport for Deep Generative Models: State of the Art and Research Challenges	2021	*IJCAI International Joint Conference on Artificial Intelligence*	–	4450–4457
Imboden S., Liu X., Lee B.S., Payne M.C., Hsieh C.-J., Lin N.Y.C.	Investigating heterogeneities of live mesenchymal stromal cells using AI-based label-free imaging	2021	*Scientific Reports*	11,1	–
Iramanesh A., Kreminski M.	AgentCraft: An Agent-Based Minecraft Settlement Generator	2021	*CEUR Workshop Proceedings*	3217	–
Jain R.	Dreamscape: Using AI to Create Speculative VR Environments	2021	*Advances in Intelligent Systems and Computing*	1289	920–937
Jain V., Nankar O., Jerrish D.J., Gite S., Patil S., Kotecha K.	A Novel AI-Based System for Detection and Severity Prediction of Dementia Using MRI	2021	*IEEE Access*	9	154324–154346
Jayakodi N.K., Doppa J.R., Pande P.P.	A General Hardware and Software Co-Design Framework for Energy-Efficient Edge AI	2021	*IEEE/ACM International Conference on Computer–Aided Design, Digest of Technical Papers, ICCAD*	–	–
Jia H., Thawonmas R., Paliyawan P.	An Aerial Cinematographer AI for Settlements in Minecraft-Toward Their Crowd Assessment	2021	*2021 IEEE 10th Global Conference on Consumer Electronics, GCCE 2021*	–	853–854
Kang M., Kim H., Lee S., Han S.	Resilience against Adversarial Examples: Data-Augmentation Exploiting Generative Adversarial Networks	2021	*KSII Transactions on Internet and Information Systems*	15,11	4105–4121
Karthika S., Durgadevi M.	Generative Adversarial Network (GAN): A general review on different variants of GAN and applications	2021	*Proceedings of the 6th International Conference on Communication and Electronics Systems, ICCES 2021*	–	–
Kawabe H., Shimomura Y., Seto S.	Braille Translation System Using Neural Machine Translation Technology II – Code Conversion of Kana-Kanji Mixed Sentences	2021	*Lecture Notes on Data Engineering and Communications Technologies*	78	417–426
Kawato M., Cortese A.	From internal models toward metacognitive AI	2021	*Biological Cybernetics*	115,5	415–430
Ke J., Shen Y., Lu Y.	Style normalization in histology with federated learning	2021	*Proceedings – International Symposium on Biomedical Imaging*	April	953–956
Kenfack P.J., Arapov D.D., Hussain R., Kazmi S.M.A., Khan A.	On the Fairness of Generative Adversarial Networks (GANs)	2021	*2021 International Conference "Nonlinearity, Information and Robotics", NIR 2021*	–	–
Khichi M., Yadav R.K.	A Threat of Deepfakes as a Weapon on Digital Platform and their Detection Methods	2021	*2021 12th International Conference on Computing Communication and Networking Technologies, ICCCNT 2021*	–	–
Kim B., Kim H., Lee S.-W., Lee G., Kwak D., Jeon D.H., Park S., Kim S., Kim S., Seo D., Lee H., Jeong M., Lee S., Kim M., Ko S.H., Kim S., Park T., Kim J., Kang S., Ryu N.-H., Yoo K.M., Chang M., Suh S., In S., Park J., Kim K., Kim H., Jeong J., Yeo Y.G., Ham D., Park D., Lee M.Y., Kang J., Kang I., Ha J.-W., Park W., Sung N.	What Changes Can Large-scale Language Models Bring? Intensive Study on HyperCLOVA: Billions-scale Korean Generative Pretrained Transformers	2021	*EMNLP 2021 – 2021 Conference on Empirical Methods in Natural Language Processing, Proceedings*		3405–3424

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Kim C., Lin X., Collins C., Taylor G. W., Amer M.R.	Learn, Generate, Rank, Explain: A Case Study of Visual Explanation by Generative Machine Learning	2021	*ACM Transactions on Interactive Intelligent Systems*	11,45019	–
Kim H., Choi Y., Kim J., Yoo S., Uh Y.	Exploiting Spatial Dimensions of Latent in GAN for Real-time Image Editing	2021	*Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*	–	852–861
Kim H.-J., Lee J., Park C., Park J.-G.	Network Anomaly Detection based on GAN with Scaling Properties	2021	*International Conference on ICT Convergence*	October	1244–1248
Kim J., Kim M., Ro Y.M.	INTERPRETATION OF LESIONAL DETECTION VIA COUNTERFACTUAL GENERATION	2021	*Proceedings – International Conference on Image Processing, ICIP*	September	96–100
Krishna V., Kannan R.J., Sariki T. P., Bharadwaja Kumar G.	Novel Drug Discovery Using Generative Model for COVID-19	2021	*Lecture Notes in Electrical Engineering*	355	427–437
Kuang Z., Liu H., Yu J., Tian A., Wang L., Fan J., Babaguchi N.	Effective De-identification Generative Adversarial Network for Face Anonymization	2021		–	3182–3191
Lahiri A., Bairagya S., Bera S., Haldar S., Biswas P.K.	Lightweight modules for efficient deep learning based image restoration	2021	*IEEE Transactions on Circuits and Systems for Video Technology*	31,4	1395–1410
Lakshmi D., Akhil D., Kartik A., Gopinath K.P., Arun J., Bhatnagar A., Rinklebe J., Kim W., Muthusamy G.	Artificial intelligence (AI) applications in adsorption of heavy metals using modified biochar	2021	*Science of the Total Environment*	801	–
Lakshminarayanan M., John N.S., Channegowda J., Raj A., Naaz F.	Devising High Fidelity Synthetic Data using Generative Adversarial Networks for Energy Storage Systems	2021		–	202–205
Larrain T.V., Valencia A., Yuan P. F.	Spatial findings on chilean architecture stylegan ai graphics	2021	*Projections – Proceedings of the 26th International Conference of the Association for Computer–Aided Architectural Design Research in Asia, CAADRIA 2021*	1	251–260
Lee H., Park E., Moon Y.-J.	Generation of Modern Satellite Data from Galileo Sunspot Drawings in 1612 by Deep Learning	2021	*Astrophysical Journal*	907,2	–
Lee N., Jeong J., Shin D.	AI System for Supporting Generation of Optimal Synthetic Pathways Based on Chemical Reaction Big Data	2021	*Computer Aided Chemical Engineering*	50	1053–1058
Lee S., Ji E.-Y., Moon Y.-J., Park E.	One-Day Forecasting of Global TEC Using a Novel Deep Learning Model	2021	*Space Weather*	19,1	–
Legaspi R., Xu W., Konishi T., Wada S.	Positing a Sense of Agency-Aware Persuasive AI: Its Theoretical and Computational Frameworks	2021	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12684 LNCS	3–18
Leguy J., Cauchy T., Duval B., Da Mota B.	Goal-directed generation of new molecules by AI methods	2021	*Computational and Data–Driven Chemistry Using Artificial Intelligence: Fundamentals, Methods and Applications*		39–67
Lehmann F., Buschek D.	Examining Autocompletion as a Basic Concept for Interaction with Generative AI	2021	*i–com*	19,3	251–264
Leibowicz C.R., Saltz E., Coleman L.	Creating AI Art Responsibly: A Field Guide for Artists [Crear arte con IA de forma responsable: una guía de campo para artistas]	2021	*Disena*	2021,19	–
Levchuk G., Lucia L., Penafiel L.	Towards adaptive and curious artificial agents: Learning, perception, and planning in dynamic uncertain environments	2021	*Proceedings of SPIE – The International Society for Optical Engineering*	11751	–
Lew A.J., Buehler M.J.	Encoding and exploring latent design space of optimal material structures via a VAE-LSTM model	2021	*Forces in Mechanics*	5	–
Li T.-W., Lee G.-C.	Performance Analysis of Fine-tune Transferred Deep Learning	2021	*Proceedings of the 3rd IEEE Eurasia Conference on IOT, Communication and Engineering 2021, ECICE 2021*	–	315–319
Li W.	Image synthesis and editing with generative adversarial networks (GANs): A review	2021	*Proceedings of the 2021 5th World Conference on Smart Trends in Systems Security and Sustainability, WorldS4 2021*	–	65–70
Li X., Wang C., Sheng Y., Zhang J., Wang W., Yin F.-F., Wu Q., Wu Q.J., Ge Y.	An artificial intelligence-driven agent for real-time head-and-neck IMRT plan generation using conditional generative adversarial network (cGAN)	2021	*Medical Physics*	48,6	2714–2723
Li X., Zhang Z.	The comparison between Conditional Generative Adversarial Nets and Deep Convolutional Generative Adversarial Network, and its GUI-related application	2021	*Proceedings – 2021 2nd International Conference on Big Data and Artificial Intelligence and Software Engineering, ICBASE 2021*	–	601–609
Li Z., Xu C.	Discover the Unknown Biased Attribute of an Image Classifier	2021	*Proceedings of the IEEE International Conference on Computer Vision*	–	14950–14959
Li Z., Yu C., Xiao J., Long M., Cui C.	Detection of radio frequency interference using an improved generative adversarial network	2021	*Astronomy and Computing*	36	–
Liang K., Wu S., Gu J.	MKA: A Scalable Medical Knowledge-Assisted Mechanism for Generative Models on Medical Conversation Tasks	2021	*Computational and Mathematical Methods in Medicine*	2021	–

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Lima G., Zhunis A., Manovich L., Cha M.	On the Social-Relational Moral Standing of AI: An Empirical Study Using AI-Generated Art	2021	*Frontiers in Robotics and AI*	8	–
Liu R., Ge Y., Choi C.L., Wang X., Li H.	DiVCO: Diverse conditional image synthesis via contrastive generative adversarial network	2021	*Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*	–	16372–16381
Liu V., Chilton L.	Neurosymbolic Generation of 3D Animal Shapes through Semantic Controls	2021	*CEUR Workshop Proceedings*	2903	–
Long Y., Wang B., Yang Z., Kailkhura B., Zhang A., Gunter C.A., Li B.	G-PATE: Scalable Differentially Private Data Generator via Private Aggregation of Teacher Discriminators	2021	*Advances in Neural Information Processing Systems*	4	2965–2977
Lu J., Eirinaki M.	Can a machine win a Grammy? An evaluation of AI-generated song lyrics	2021	*Proceedings – 2021 IEEE International Conference on Big Data, Big Data 2021*	–	4896–4905
Luong T.D., Tien V.M., Anh H.T., Luyen N.V., Vy N.C., Duy P.T., Pham V.-H.	FedChain: A Collaborative Framework for Building Artificial Intelligence Models using Blockchain and Federated Learning	2021	*Proceedings – 2021 8th NAFOSTED Conference on Information and Computer Science, NICS 2021*	–	149–154
MacKay C.T., Moh T.-S.	Learning for Free: Object Detectors Trained on Synthetic Data	2021	*Proceedings of the 2021 15th International Conference on Ubiquitous Information Management and Communication, IMCOM 2021*	–	–
Maiti A., Chatterjee B., Santosh K. C.	Skin cancer classification through quantized color features and generative adversarial network	2021	*International Journal of Ambient Computing and Intelligence*	12,3	75–97
Man N.X.	Automating the design and assembly process of timber block construction system	2021	*AIP Conference Proceedings*	2428	–
Manu D., Sheng Y., Yang J., Deng J., Geng T., Li A., Ding C., Jiang W., Yang L.	FL-DISCO: Federated Generative Adversarial Network for Graph-based Molecule Drug Discovery	2021	*IEEE/ACM International Conference on Computer–Aided Design, Digest of Technical Papers, ICCAD*	–	–
Marlow R., Wood D.	Ghost in the machine or monkey with a typewriter - Generating titles for Christmas research articles in the BMJ using artificial intelligence: Observational study	2021	*The BMJ*	375	–
Marynowsky W.	From our deceased bodies flowers will grow, we are in them and that is eternity	2021	*Proceedings – SIGGRAPH Asia 2021 Art Gallery, SA 2021*	–	–
Masood M., Nawaz M., Javed A., Nazir T., Mehmood A., Mahum R.	Classification of Deepfake Videos Using Pre-trained Convolutional Neural Networks	2021	*2021 International Conference on Digital Futures and Transformative Technologies, ICoDT2 2021*	–	–
Memon Q.A., Valappil N.	On multi-class aerial image classification using learning machines	2021	*Computer Vision and Recognition Systems Using Machine and Deep Learning Approaches: Fundamentals, technologies and applications*	–	351–384
Menéndez S.C., Hassani B.K.	Expected shortfall reliability—added value of traditional statistics and advanced artificial intelligence for market risk measurement purposes	2021	*Mathematics*	9,17	–
Meyers J., Fabian B., Brown N.	De novo molecular design and generative models	2021	*Drug Discovery Today*	26,11	2707–2715
Mirsky Y., Lee W.	The Creation and Detection of Deepfakes	2021	*ACM Computing Surveys*	54,1	–
Mirzazadeh A., Mohseni A., Ibrahim S., Giuste F.O., Zhu Y., Shehata B.M., Deshpande S.R., Wang M.D.	Improving Heart Transplant Rejection Classification Training using Progressive Generative Adversarial Networks	2021	*BHI 2021 – 2021 IEEE EMBS International Conference on Biomedical and Health Informatics, Proceedings*	–	
Mitchell B.R., Cohen M.C., Cohen S.	Dealing with Multi-Dimensional Data and the Burden of Annotation: Easing the Burden of Annotation	2021	*American Journal of Pathology*	191,10	1709–1716
Moghadam S.S., Azmi R., Zarvani M.	WBT-GAN: Wavelet based Generative Adversarial Network for Texture Synthesis	2021	*ICCKE 2021 – 11th International Conference on Computer Engineering and Knowledge*		441–446
Mohana, Shariff D.M., Abhishek H., Akash D.	Artificial (or) Fake Human Face Generator using Generative Adversarial Network (GAN) Machine Learning Model	2021	*2021 4th International Conference on Electrical, Computer and Communication Technologies, ICECCT 2021*	–	–
Montero M.L., Ludwig C.J.H., Costa R.P., Malhotra G., Bowers J.S.	THE ROLE OF DISENTANGLEMENT IN GENERALISATION	2021	*ICLR 2021 – 9th International Conference on Learning Representations*	–	–
Mookdarsanit L., Mookdarsanit P.	ThaiWritableGAN: Handwriting generation under given information	2021	*International Journal of Computing and Digital Systems*	10,1	689–699
Mukherjee P., Pal M., Ghosh L., Konar A.	A Generative Model Based Approach for Zero-Shot Breast Cancer Segmentation Explaining Pixels' Contribution to the Model's Prediction	2021	*Studies in Computational Intelligence*	937	401–425
Muller M., Wang A.Y., Ross S.I., Weisz J.D., Agarwal M., Talamadupula K., Houde S., Martinez F., Richards J., Drozdal J., Liu X., Piorkowski D., Wang D.	How Data Scientists Improve Generated Code Documentation in Jupyter Notebooks	2021	*CEUR Workshop Proceedings*	2903	–
Na H., Kim W.	A Study on The Practical Use of Generative Design in the Product Design Process	2021	*Archives of Design Research*	34,1	85–98

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Ni H., Szpruch L., Sabate-Vidales M., Xiao B., Wiese M., Liao S.	Sig-wasserstein GANs for time series generation	2021		–	–
Nobari A.H., Rashad M.F., Ahmed F.	Creativegan: Editing generative adversarial networks for creative design synthesis	2021	*Proceedings of the ASME Design Engineering Technical Conference*	3A–2021	–
Olender M.L., De La Torre Hernández J.M., Athanasiou L. S., Nezami F.R., Edelman E.R.	Artificial intelligence to generate medical images: Augmenting the cardiologist's visual clinical workflow	2021	*European Heart Journal – Digital Health*	2,3	539–544
Olson M.L., Khanna R., Neal L., Li F., Wong W.-K.	Counterfactual state explanations for reinforcement learning agents via generative deep learning	2021	*Artificial Intelligence*	295	–
O'Mara A., Alsmadi I., Aleroud A.	Generative Adverserial Analysis of Phishing Attacks on Static and Dynamic Content of Webpages	2021	*19th IEEE International Symposium on Parallel and Distributed Processing with Applications*	–	1657–1662
Ozcelik F., Alganci U., Sertel E., Unal G.	Rethinking CNN-Based Pansharpening: Guided Colorization of Panchromatic Images via GANs	2021	*IEEE Transactions on Geoscience and Remote Sensing*	59,4	3486–3501
Parisi L.	Negative optics in vision machines	2021	*AI and Society*	36,4	1281–1293
Park C., Kim Y., Park J.-G., Hong D., Seo C.	Evaluating Differentially Private Generative Adversarial Networks over Membership Inference Attack	2021	*IEEE Access*	9,	167412–167425
Park J.-E., Kim G., Hong S.	Green Band Generation for Advanced Baseline Imager Sensor Using Pix2Pix with Advanced Baseline Imager and Advanced Himawari Imager Observations	2021	*IEEE Transactions on Geoscience and Remote Sensing*	59,8	6415–6423
Parr T., Pezzulo G.	Understanding, Explanation, and Active Inference	2021	*Frontiers in Systems Neuroscience*	15	–
Parrilla-Gutierrez J.M., Parrilla-Gutierrez J.M.	Predicting Real-time Scientific Experiments Using Transformer models and Reinforcement Learning	2021	*Proceedings – 20th IEEE International Conference on Machine Learning and Applications, ICMLA 2021*	–	502–506
Pataranutaporn P., Danry V., Leong J., Punpongsanon P., Novy D., Maes P., Sra M.	AI-generated characters for supporting personalized learning and well-being	2021	*Nature Machine Intelligence*	3,12	1013–1022
Paul W., Cao Y., Zhang M., Burlina P.	Defending Medical Image Diagnostics Against Privacy Attacks Using Generative Methods: Application to Retinal Diagnostics	2021	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12969 LNCS	174–187
Paul W., Wang I.-J., Alajaji F., Burlina P.	Unsupervised discovery, control, and disentanglement of semantic attributes with applications to anomaly detection	2021	*Neural Computation*	33,3	802–826
Pearlman E.	AIBO – A SICKO AI BRAINWAVE OPERA	2021	*Proceedings – 4th International Conference on Multimedia Information Processing and Retrieval, MIPR 2021*	–	320–322
Pill S., SueSee B., Hyndman B., Williams J.	Physical education teachers' use of digital game design principles	2021	*Journal of Teaching in Physical Education*	40,1	1–9
Pisoni G., Díaz-Rodríguez N., Gijlers H., Tonolli L.	Human-centred artificial intelligence for designing accessible cultural heritage	2021	*Applied Sciences (Switzerland)*	11,2	1–30
Po Shun Chen A., Wu Liu C.	Crafting ASR and Conversational Models for an Agriculture Chatbot	2021		–	61–66
Pölsterl S., Wachinger C.	Adversarial Learned Molecular Graph Inference and Generation	2021	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12458 LNAI	173–189
Pulford G.W., Kondrashov K.	Convergence and Optimality Analysis of Low-Dimensional Generative Adversarial Networks Using Error Function Integrals	2021	*IEEE Access*	9	165366–165384
Puthuvayil N., Zaman T., Arunkumar K., Sivasankari S., Cheyadri R.	Deep Generative Design Models for Improved Door Frame Performance	2021	*SAE Technical Papers*	–	–
Qian M., Laguardia J., Qian D.	Morality Beyond the Lines: Detecting Moral Sentiment Using AI-Generated Synthetic Context	2021	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	12797 LNAI	84–94
Qian M., Newton C., Qian D.	Cultural Understanding Using In-context Learning and Masked Language Modeling	2021	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13095 LNCS	500–508
Qin L., Wu J., Li B.	Transient Stability Self-Adaptive Assessment Based on Sample Enhancement of DCGAN	2021	*5th IEEE Conference on Energy Internet and Energy System Integration: Energy Internet for Carbon Neutrality, EI2 2021*	–	3103–3108
Rajabi A., Garibay O.O.	Towards Fairness in AI: Addressing Bias in Data Using GANs	2021	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13095 LNCS	509–518
Raji I.D., Scheuerman M.K., Amironesei R.	"you can't sit with us": Exclusionary pedagogy in AI ethics education	2021	*FAccT 2021 – Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*	–	515–525
Rangarajan A.K., Ramachandran H.K.	A preliminary analysis of AI based smartphone application for diagnosis of COVID-19 using chest X-ray images	2021	*Expert Systems with Applications*	183	–

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Reddy T.S., Harikiran J.	DALF: An AI Enabled Adversarial Framework for Classification of Hyperspectral Images	2021	*Indonesian Journal of Electrical Engineering and Informatics*	9,4	929–942
Reynolds L., McDonell K.	Multiversal views on language models	2021	*CEUR Workshop Proceedings*	2903	–
Rezvov V., Krinitskiy M., Gavrikov A., Gulev S.	Comparison of AI-Based Approaches for Statistical Downscaling of Surface Wind Fields in the North Atlantic	2021	*CEUR Workshop Proceedings*	2930	129–134
Rippel O., Mertens P., Konig E., Merhof D.	Gaussian Anomaly Detection by Modeling the Distribution of Normal Data in Pretrained Deep Features	2021	*IEEE Transactions on Instrumentation and Measurement*	70	–
Robinson K.P., Eglash R., Bennett A., Nandakumar S., Robert L.	Authente-Kente: enabling authentication for artisanal economies with deep learning	2021	*AI and Society*	36,1	369–379
Sabeel U., Heydari S.S., Elgazzar K., El-Khatib K.	CVAE-AN: Atypical Attack Flow Detection Using Incremental Adversarial Learning	2021	*2021 IEEE Global Communications Conference, GLOBECOM 2021 – Proceedings*	–	–
Safron A., DeYoung C.G.	Integrating Cybernetic Big Five Theory with the free energy principle: A new strategy for modeling personalities as complex systems	2021	*Measuring and Modeling Persons and Situations*	–	617–649
Sangeetha K.N., Singh S., Usha B. A., Anirudh R S Ishaangonnagar T.	Security Enhancement in Image Steganography using Generative Adversarial Networks	2021	*Proceedings – 5th International Conference on Computing Methodologies and Communication, ICCMC 2021*	–	178–185
Sargar O., Kinger S.	Image captioning methods and metrics	2021	*2021 International Conference on Emerging Smart Computing and Informatics, ESCI 2021*	–	522–526
Sarker I.H.	Deep Learning: A Comprehensive Overview on Techniques, Taxonomy, Applications and Research Directions	2021	*SN Computer Science*	2,6	–
Sarrut D., Etxebeste A., Muñoz E., Krah N., Létang J.M.	Artificial Intelligence for Monte Carlo Simulation in Medical Physics	2021	*Frontiers in Physics*	9,	–
Schaefferkoetter J., Yan J., Moon S., Chan R., Ortega C., Metser U., Berlin A., Veit-Haibach P.	Deep learning for whole-body medical image generation	2021	*European Journal of Nuclear Medicine and Molecular Imaging*	48,12	3817–3826
Seo R.	A Study on the Creativity of Algorithm Art Using Artificial Intelligence	2021	*Communications in Computer and Information Science*	1498 CCIS	159–164
Sergio G.C., Lee M.	Scene2Wav: a deep convolutional sequence-to-conditional SampleRNN for emotional scene musicalization	2021	*Multimedia Tools and Applications*	80,2	1793–1812
Sesha Sai Aparna T., Anuradha T.	Applications of autoencoders along with deep learning techniques to generate valid molecules	2021	*Journal of Physics: Conference Series*	2070,1	–
Sharif A., Zhai G., Min X., Jia J., Munir K.	Enhancing Decoding Rate of Barcode Decoders in Complex Scenes for IoT Systems	2021	*IEEE Internet of Things Journal*	8,24	17495–17507
Sharma A., Singh P., Dar G.	Artificial Intelligence and Machine Learning for Healthcare Solutions	2021	*Data Analytics in Bioinformatics: A Machine Learning Perspective*		283–291
Sheng Z., Jin K., Ma Z., Zhuo H.H.	Action generative networks planning for deformable object with raw observations	2021	*Sensors*	21,13	–
Shieh C.-S., Nguyen T.-T., Lin W.-W., Huang Y.-L., Horng M.-F., Lee T.-F., Miu D.	Synthesis of Adversarial DDoS Attacks Using Wasserstein Generative Adversarial Networks with Gradient Penalty	2021	*Proceedings – 2021 6th International Conference on Computational Intelligence and Applications, ICCIA 2021*	–	118–122
Shivadekar S., Mangalagiri J., Nguyen P., Chapman D., Halem M., Gite R.	An intelligent parallel distributed streaming framework for near real-time science sensors and high-resolution medical images	2021	*ACM International Conference Proceeding Series*	–	–
Shu D., Doss C., Mondschein J., Kopecky D., Fitton-Kane V.A., Bush L., Tucker C.	A Pilot Study Investigating STEM Learners' Ability to Decipher AI-generated Video	2021	*ASEE Annual Conference and Exposition, Conference Proceedings*	–	–
Sindhura D.N., Pai R.M., Bhat S.N., Manohara Pai M.M.	Synthetic Vertebral Column Fracture Image Generation by Deep Convolution Generative Adversarial Networks	2021	*Proceedings of CONECCT 2021: 7th IEEE International Conference on Electronics, Computing and Communication Technologies*	–	–
Smith J., Freeman J.	Effects of Deep Neural Networks on the Perceived Creative Autonomy of a Generative Musical System	2021	*17th AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment, AIIDE 2021*	–	91–98
Smitha A., Jidesh P.	A Semi-supervised Generative Adversarial Network for Retinal Analysis from Fundus Images	2021	*Communications in Computer and Information Science*	1376 CCIS	351–362
Sohn K., Sung C.E., Koo G., Kwon O.	Artificial intelligence in the fashion industry: consumer responses to generative adversarial network (GAN) technology	2021	*International Journal of Retail and Distribution Management*	49,1	61–80
Song Z., Sun L.	Comparing Performance and Efficiency of Designers and Design Intelligence	2021	*Proceedings – 2021 14th International Symposium on Computational Intelligence and Design, ISCID 2021*	–	57–60
Sönmez A., Sorguç A.G.	Computer-Aided Fabrication Technologies as Computational Design Mediators	2021	*Proceedings of the International Conference on Education and Research in Computer Aided Architectural Design in Europe*	1,	465–474
Soro F., Favale T., Giordano D., Vassio L., Ben Houidi Z., Drago I.	The new abnormal: Network anomalies in the AI era	2021	*Communication Networks and Service Management in the Era of Artificial Intelligence and Machine Learning*	–	261–288
Srinivasan R., Uchino K.	Biases in generative art: A causal look from the lens of art history	2021	*FAccT 2021 – Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*	–	41–51

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Striuk O., Kondratenko Y.	Generative Adversarial Neural Networks and Deep Learning: Successful Cases and Advanced Approaches	2021	*International Journal of Computing*	20,3	339–349
Subramonyam H., Seifert C., Adar E.	Towards A Process Model for Co-Creating AI Experiences	2021	*DIS 2021 – Proceedings of the 2021 ACM Designing Interactive Systems Conference: Nowhere and Everywhere*	–	1529–1543
Sudarshana K., Mylarareddy C.	Recent trends in deepfake detection	2021	*Deep Natural Language Processing and AI Applications for Industry 5.0*	–	1–28
Suh M.M., Youngblom E.	AI as Social Glue: Uncovering the Roles of Deep Generative AI during Social Music Composition	2021	*Conference on Human Factors in Computing Systems – Proceedings*	–	–
Sun H., Lin Z., Zheng C., Liu S., Huang M.	PsyQA: A Chinese Dataset for Generating Long Counseling Text for Mental Health Support	2021	*Findings of the Association for Computational Linguistics: ACL–IJCNLP 2021*	–	1489–1503
Sun Y., Chong N.S.T., Ochiai H.	Information Stealing in Federated Learning Systems Based on Generative Adversarial Networks	2021	*Conference Proceedings – IEEE International Conference on Systems, Man and Cybernetics*	–	2749–2754
Suzuki M., Kamcya Y., Kutsuna T., Mitsumoto N.	Understanding the reason for misclassification by generating counterfactual images	2021	*Proceedings of MVA 2021 – 17th International Conference on Machine Vision Applications*	–	–
Tanabe T., Fukuchi K., Sakuma J., Akimoto Y.	Level generation for angry birds with sequential VAE and latent variable evolution	2021	*GECCO 2021 – Proceedings of the 2021 Genetic and Evolutionary Computation Conference*	–	1052–1060
Tang B., Ewalt J., Ng H.-L.	Generative AI Models for Drug Discovery	2021	*Topics in Medicinal Chemistry*	37,	221–243
Tang J., Liu M., Jiang N., Cai H., Yu W., Zhou J.	Data-free network pruning for model compression	2021	*Proceedings – IEEE International Symposium on Circuits and Systems*		
Terziyan V., Gryshko S., Golovianko M.	Taxonomy of generative adversarial networks for digital immunity of Industry 4.0 systems	2021	*Procedia Computer Science*	180,	676–685
Thakkar A., Chadimová V., Bjerrum E.J., Engkvist O., Reymond J.-L.	Retrosynthetic accessibility score (RAscore)-rapid machine learned synthesizability classification from AI driven retrosynthetic planning	2021	*Chemical Science*	12,9	3339–3349
Thambawita V., Hicks S.A., Isaksen J., Stensen M.H., Haugen T.B., Kanters J., Parasa S., De Lange T., Johansen H.D., Johansen D., Hammer H.L., Halvorsen P., Riegler M.A.	DeepSynthBody: The beginning of the end for data deficiency in medicine	2021	*2021 International Conference on Applied Artificial Intelligence, ICAPAI 2021*	–	–
Thanuja N., N R D.	A Convenient Machine Learning Model for Cyber Security	2021	*Proceedings – 5th International Conference on Computing Methodologies and Communication, ICCMC 2021*		284–290
Thomas M., Smith R.T., O'Boyle N. M., de Graaf C., Bender A.	Comparison of structure- and ligand-based scoring functions for deep generative models: a GPCR case study	2021	*Journal of Cheminformatics*	13,1	–
Thurzo A., Kosnáčová H.S., Kurilová V., Kosmeľ S., Beňuš R., Moravanský N., Kováč P., Kuracinová K.M., Palkovič M., Varga I.	Use of advanced artificial intelligence in forensic medicine, forensic anthropology and clinical anatomy	2021	*Healthcare (Switzerland)*	9,11	–
Tong X., Liu X., Tan X., Li X., Jiang J., Xiong Z., Xu T., Jiang H., Qiao N., Zheng M.	Generative Models for de Novo Drug Design	2021	*Journal of Medicinal Chemistry*	64,19	14011–14027
Tran D.P., Tada S., Yumoto A., Kitao A., Ito Y., Uzawa T., Tsuda K.	Using molecular dynamics simulations to prioritize and understand AI-generated cell penetrating peptides	2021	*Scientific Reports*	11,1	–
Tripathi M.K., Nath A., Singh T.P., Ethayathulla A.S., Kaur P.	Evolving scenario of big data and Artificial Intelligence (AI) in drug discovery	2021	*Molecular Diversity*	25,3	1439–1460
Ukwuoma C.C., Belal Bin Heyat M., Masadeh M., Akhtar F., Zhiguang Q., Bondzie-Selby E., Alshorman O., Alkahtani F.	Image Inpainting and Classification Agent Training Based on Reinforcement Learning and Generative Models with Attention Mechanism	2021	*Proceedings of the International Conference on Microelectronics, ICM*	–	96–101
Urban Davis J., Anderson F., Stroetzel M., Grossman T., Fitzmaurice G.	Designing Co-Creative AI for Virtual Environments	2021	*ACM International Conference Proceeding Series*	–	–
Vaccari I., Orani V., Paglialonga A., Cambiaso E., Mongelli M.	A generative adversarial network (GAN) technique for internet of medical things data	2021	*Sensors*	21,11	–
Vankayala S.K., Kumar S., Roy I., Thirumulanathan D., Yoon S., Kanakaraj I.S.	Radio Map Estimation Using a Generative Adversarial Network and Related Business Aspects	2021	*International Symposium on Wireless Personal Multimedia Communications, WPMC*	–	–
Wahab H.Y.B.A., Sourin A.	Application of Generative Adversarial Networks and Latent Space Exploration in Music Visualisation	2021	*Proceedings – 2021 International Conference on Cyberworlds, CW 2021*	–	125–128

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Wallace B., Martin C.P., Tørresen J., Nymoen K.	Learning Embodied Sound-Motion Mappings: Evaluating AI-Generated Dance Improvisation	2021	*ACM International Conference Proceeding Series*	–	–
Walters W.P., Barzilay R.	Critical assessment of AI in drug discovery	2021	*Expert Opinion on Drug Discovery*	16,9	937–947
Wan Y., Qu Y., Gao L., Xiang Y.	Differentially Privacy-Preserving Federated Learning Using Wasserstein Generative Adversarial Network	2021	*Proceedings – IEEE Symposium on Computers and Communications*	–	–
Wang B., Wu F., Long Y., Rimanic L., Zhang C., Li B.	DataLens: Scalable Privacy Preserving Training via Gradient Compression and Aggregation	2021	*Proceedings of the ACM Conference on Computer and Communications Security*	–	2146–2168
Wang C., Shao M., Zhang W., Zhang Y.	A context-based multi-scale discriminant model for natural image inpainting	2021	*AATCC Journal of Research*	8,Special Issue 1	1–14
Wang E.T.G., Chen A.P.S., Liu C.W.	A Hybrid Evaluation of AI Chatbots in Taiwan Agriculture Services	2021	*Proceedings – 2021 International Conference on Technologies and Applications of Artificial Intelligence, TAAI 2021*	–	112–118
Wang S., He Z.	A prediction model of vessel trajectory based on generative adversarial network	2021	*Journal of Navigation*	74,5	1161–1171
Wank A.A., Andrews-Hanna J.R., Grilli M.D.	Searching for the past: Exploring the dynamics of direct and generative autobiographical memory reconstruction among young and cognitively normal older adults	2021	*Memory and Cognition*	49,3	422–437
Wei H., Ye D., Liu Z., Wu H., Yuan B., Fu Q., Yang W., Li Z.	Boosting Offline Reinforcement Learning with Residual Generative Modeling	2021	*IJCAI International Joint Conference on Artificial Intelligence*	–	3574–3580
Weisser F., Mayer T., Baccouche B., Utschick W.	Generative-AI Methods for Channel Impulse Response Generation	2021	*WSA 2021 – 25th International ITG Workshop on Smart Antennas*	–	65–70
Weisz J.D., Muller M., Houde S., Richards J., Ross S.I., Martinez F., Agarwal M., Talamadupula K.	Perfection Not Required? Human-AI Partnerships in Code Translation	2021	*International Conference on Intelligent User Interfaces, Proceedings IUI*	–	402–412
Wilms M., Mouches P., Bannister J. J., Rajashekar D., Langner S., Forkert N.D.	Towards Self-explainable Classifiers and Regressors in Neuroimaging with Normalizing Flows	2021	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13001 LNCS	23–33
Wood C.	Artificial intelligence experience: Participatory art workshops to explore AI imaginaries	2021	*Routledge Handbook of Art, Science, and Technology Studies*	–	426–449
Wu C., Seokin K., Zhang L.	On GANs Art in Context of Artificial Intelligence Art	2021	*ACM International Conference Proceeding Series*	–	168–171
Wu J., Mo S., Wang L.	An Empirical Study of Uncertainty Gap for Disentangling Factors	2021	*Trustworthy AI 2021 – Proceedings of the 1st International Workshop on Trustworthy AI for Multimedia Computing, co–located with ACM MM 2021*	–	1–8
Wu Q., Zhu B., Yong B., Wei Y., Jiang X., Zhou R., Zhou Q.	ClothGAN: generation of fashionable Dunhuang clothes using generative adversarial networks	2021	*Connection Science*	33,2	341–358
Xiao X., Xiao W., Zhang D., Zhang B., Hu G., Li Q., Xia S.	Phishing websites detection via CNN and multi-head self-attention on imbalanced datasets	2021	*Computers and Security*	108	–
Xu Z., Wauchope O.R., Frank A.T.	Navigating Chemical Space by Interfacing Generative Artificial Intelligence and Molecular Docking	2021	*Journal of Chemical Information and Modeling*	61,11	5589–5600
Xue S., Bohn K.P., Guo R., Sari H., Viscione M., Rominger A., Li B., Shi K.	Development of a deep learning method for CT-free correction for an ultra-long axial field of view PET scanner	2021	*Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS*	–	4120–4122
Yadav P., Jaswal I., Maravi J., Choudhary V., Khanna G.	DeepFake Detection using InceptionResNetV2 and LSTM	2021	*CEUR Workshop Proceedings*	3058	–
Yang M., Li C., Shen Y., Wu Q., Zhao Z., Chen X.	Hierarchical Human-Like Deep Neural Networks for Abstractive Text Summarization	2021	*IEEE Transactions on Neural Networks and Learning Systems*	32,6	2744–2757
Yang R., Cao T.-J., Chen X.-Q., Zhang F.-R.	A novel and universal GAN-based countermeasure to recover adversarial examples to benign examples	2021	*Computers and Security*	111	–
Yang R., Chen X.-Q., Cao T.-J.	APE-GAN++: An Improved APE-GAN to Eliminate Adversarial Perturbations	2021	*IAENG International Journal of Computer Science*	48,3	1–18
Yang Z., Yu C.-H., Buehler M.J.	Deep learning model to predict complex stress and strain fields in hierarchical composites	2021	*Science Advances*	7,15	–
Yegemberdiyeva G., Amirgaliyev B.	Study of AI Generated and Real Face Perception	2021	*SIST 2021 – 2021 IEEE International Conference on Smart Information Systems and Technologies*	–	–
Yin X., Huang J., He W., Guo W., Yu H., Cui L.	Group task allocation approach for heterogeneous software crowdsourcing tasks	2021	*Peer–to–Peer Networking and Applications*	14,3	1736–1747
Yoo S., Lee S., Kim S., Hwang K.H., Park J.H., Kang N.	Integrating deep learning into CAD/CAE system: generative design and evaluation of 3D conceptual wheel	2021	*Structural and Multidisciplinary Optimization*	64,4	2725–2747
Yuan S., Liu R., Chen M., Chen B., Qiu Z., He X.	Learning to Compose Stylistic Calligraphy Artwork with Emotions	2021	*MM 2021 – Proceedings of the 29th ACM International Conference on Multimedia*		3701–3709

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Yuditskaya S., Sun S., Schedel M.	Synthetic Erudition Assist Lattice	2021	*Proceedings of the International Conference on New Interfaces for Musical Expression*	–	–
Zhang H., Wang Y., Zhao H., Lu K., Yu D., Wen J.	Accelerated topological design of metaporous materials of broadband sound absorption performance by generative adversarial networks	2021	*Materials and Design*	207	–
Zhang L., Ju X., Shang Y., Li X.	Deeply Encoding Stable Patterns from Contaminated Data for Scenery Image Recognition	2021	*IEEE Transactions on Cybernetics*	51,12	5671–5680
Zhang L., Wu J., Shen J., Chen M., Wang R., Zhou X., Xu C., Yao Q., Wu Q.	SATP-GAN: self-attention based generative adversarial network for traffic flow prediction	2021	*Transportmetrica B*	9,1	552–568
Zhang W., Li H., Li Y., Liu H., Chen Y., Ding X.	Application of deep learning algorithms in geotechnical engineering: a short critical review	2021	*Artificial Intelligence Review*	54,8	5633–5673
Zhang Z., Li G., Xu Y., Tang X.	Application of artificial intelligence in the mri classification task of human brain neurological and psychiatric diseases: A scoping review	2021	*Diagnostics*	11,8	–
Zhao C., Yang J., Xiong W., Li J.	Two Generative Design Methods of Hospital Operating Department Layouts Based on Healthcare Systematic Layout Planning and Generative Adversarial Network	2021	*Journal of Shanghai Jiaotong University (Science)*	26,1	103–115
Zhou Q., Zuley M., Guo Y., Yang L., Nair B., Vargo A., Ghannam S., Arefan D., Wu S.	A machine and human reader study on AI diagnosis model safety under attacks of adversarial images	2021	*Nature Communications*	12,1	–
Zhu Q., Sun B., Zhou Y., Sun W., Xiang J.	Sample Augmentation for Intelligent Milling Tool Wear Condition Monitoring Using Numerical Simulation and Generative Adversarial Network	2021	*IEEE Transactions on Instrumentation and Measurement*	70	–
Zhu Y., Wu Y., Yang Y., Yan Y.	Saying the Unseen: Video Descriptions via Dialog Agents	2021	*IEEE Transactions on Pattern Analysis and Machine Intelligence*	–	–
Zhu Y., Yang L.T., Feng J., Xie X.	Tensor-Based GAN to Defense Adversarial Attacks for Cyber-Physical-Social System	2021	*IEEE Transactions on Network Science and Engineering*	–	–
Abady L., Cannas E.D., Bestagini P., Tondi B., Tubaro S., Barni M.	An Overview on the Generation and Detection of Synthetic and Manipulated Satellite Images	2022	*APSIPA Transactions on Signal and Information Processing*	11,1	–
Abduljawad M., Alsalmani A.	Towards Creating Exotic Remote Sensing Datasets using Image Generating AI	2022	*2022 International Conference on Electrical and Computing Technologies and Applications, ICECTA 2022*		84–88
Adewumi T., Liwicki F., Liwicki M.	Vector Representations of Idioms in Conversational Systems	2022	*Sci*	4,4	–
Ahmadian H., Mageswaran P., Walter B.A., Blakaj D.M., Bourekas E.C., Mendel E., Marras W.S., Soghrati S.	Toward an artificial intelligence-assisted framework for reconstructing the digital twin of vertebra and predicting its fracture response	2022	*International Journal for Numerical Methods in Biomedical Engineering*	38,6	–
Ahmed R.A.E.-D., Fernández-Veiga M., Gawich M.	Neural Collaborative Filtering with Ontologies for Integrated Recommendation Systems	2022	*Sensors*	22,2	–
Ahmed S.R., Sonuc E., Ahmed M. R., Duru A.D.	Analysis Survey on Deepfake detection and Recognition with Convolutional Neural Networks	2022	*HORA 2022 – 4th International Congress on Human–Computer Interaction, Optimization and Robotic Applications, Proceedings*	–	–
Alasadi J., Alhilli A., Atrey P.K., Singh V.K.	A Generative Approach to Mitigate Bias in Face Matching using Learned Latent Structure	2022	*Proceedings – 2022 IEEE 8th International Conference on Multimedia Big Data, BigMM 2022*	–	150–157
Albahli S., Yar G.N.A.H.	AI-driven deep convolutional neural networks for chest X-ray pathology identification	2022	*Journal of X–Ray Science and Technology*	30,2	365–376
Alfrink K., Keller I., Kortuem G., Doorn N.	Contestable AI by Design: Towards a Framework	2022	*Minds and Machines*		
Alghazzawi D.M., Hasan S.H., Bhatia S.	Optimized Generative Adversarial Networks for Adversarial Sample Generation	2022	*Computers, Materials and Continua*	72,2	3877–3897
Ali H., Biswas R., Ali F., Shah U., Alamgir A., Mousa O., Shah Z.	The role of generative adversarial networks in brain MRI: a scoping review	2022	*Insights into Imaging*	13,1	–
Ali H., Shah Z.	Combating COVID-19 Using Generative Adversarial Networks and Artificial Intelligence for Medical Images: Scoping Review	2022	*JMIR Medical Informatics*	10,6	–
Ali M.S., Azam F., Safdar A., Anwar M.W.	Intelligent Agents in Educational Institutions: NEdBOT - NLP-based Chatbot for Administrative Support Using DialogFlow	2022	*Proceedings – 2022 IEEE International Conference on Agents, ICA 2022*	–	30–35
Allen C., Aryal S., Do T., Gautum R., Hasan M.M., Jasthi B.K., Gnimpieba E., Gadhamshetty V.	Deep learning strategies for addressing issues with small datasets in 2D materials research: Microbial Corrosion	2022	*Frontiers in Microbiology*	13	–

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Alshehri H.A., Junath N., Panwar P., Shukla K., Rahin S.A., Martin R.J.	Self-Attention-Based Edge Computing Model for Synthesis Image to Text through Next-Generation AI Mechanism	2022	*Mathematical Problems in Engineering*	2022	–
Alymani A., Jabi W., Corcoran P.	Graph machine learning classification using architectural 3D topological models	2022	*Simulation*		
Anantrasirichai N., Bull D.	Artificial intelligence in the creative industries: a review	2022	*Artificial Intelligence Review*	55,1	589–656
Aranburu A., Justel D., Contero M., Camba J.D.	Geometric Variability in Parametric 3D Models: Implications for Engineering Design	2022	*Procedia CIRP*	109	383–388
Arulkumaran K., Nguyen-Phuoc T.	Minimal criterion artist collective	2022	*GECCO 2022 Companion – Proceedings of the 2022 Genetic and Evolutionary Computation Conference*	–	687–690
Arya R.K., Agrawal P., Aggarwal A., Dokania A.K., Pal E., Karki M., Goswami K., Jain S., Dugh R., Dugh A.	Eyes Say It All: Deep fake Detection Method Analysis Using Different Metrics	2022	*Lecture Notes in Networks and Systems*	426	395–402
Asaduzzaman M., Rahman M.M.	An Adversarial Approach for Intrusion Detection Using Hybrid Deep Learning Model	2022	*2022 International Conference on Information Technology Research and Innovation, ICITRI 2022*	–	18–23
Atmadja H.Y.N., Bustamam A., Hermawan	Generated Tabular Data with Multi-GANs for Arrhythmia Classification Based on DNN Models	2022	*2022 International Conference of Science and Information Technology in Smart Administration, ICSINTESA 2022*	–	69–74
Aydin N., Ayhan Erdem O.	A Research On The New Generation Artificial Intelligence Technology Generative Pretraining Transformer 3	2022	*3rd International Informatics and Software Engineering Conference, IISEC 2022*	–	–
Aziz N.A., Sulaiman M.A.H., Zabidi A., Yassin I.M., Ali M.S.A.M., Rizman Z.I.	Lightweight Generative Adversarial Network Fundus Image Synthesis	2022	*International Journal on Informatics Visualization*	6,44958	270–277
Bachtiar F.A., Fauzulhaq A.D., Manullang M.T.R., Pontoh F.R., Nugroho K.S., Yudistira N.	A Generative-Based Chatbot for Daily Conversation: A Preliminary Study	2022	*ACM International Conference Proceeding Series*		8–12
Baduge S.K., Thilakarathna S., Perera J.S., Arashpour M., Sharafi P., Teodosio B., Shringi A., Mendis P.	Artificial intelligence and smart vision for building and construction 4.0: Machine and deep learning methods and applications	2022	*Automation in Construction*	141	–
Bahani M., El Ouaazizi A., Maalmi K.	AraBERT and DF-GAN fusion for Arabic text-to-image generation	2022	*Array*	16	–
Bai T., Zhao J., Zhu J., Han S., Chen J., Li B., Kot A.	Toward Efficiently Evaluating the Robustness of Deep Neural Networks in IoT Systems: A GAN-Based Method	2022	*IEEE Internet of Things Journal*	9,3	1875–1884
Ban Y., Rosman G., Eckhoff J.A., Ward T.M., Hashimoto D.A., Kondo T., Iwaki H., Meireles O. R., Rus D.	SUPR-GAN: SUrgical PRediction GAN for Event Anticipation in Laparoscopic and Robotic Surgery	2022	*IEEE Robotics and Automation Letters*	7,2	5741–5748
Banerjee A., Pati S.K.	Predicting Antiviral Drugs for COVID-19 Treatment Using Artificial Intelligence Based Approach	2022	*Studies in Computational Intelligence*	963	245–269
Bank M., Sandor V., Schinegger K.	Learning Spatiality: A GAN method for designing architectural models through labelled sections	2022	*Proceedings of the International Conference on Education and Research in Computer Aided Architectural Design in Europe*	2	611–619
Barthet M., Khalifa A., Liapis A., Yannakakis G.	Generative Personas That Behave and Experience Like Humans	2022	*ACM International Conference Proceeding Series*	–	–
Benabdallah G., Alexander A., Ghosh S., Glogovac-Smith C., Jacoby L., Lustig C., Nguyen A., Parkhurst A., Reyes K., Tan N.H., Wolcher E., Psarra A., Rosner D. K.	Slanted Speculations: Material Encounters with Algorithmic Bias	2022	*DIS 2022 – Proceedings of the 2022 ACM Designing Interactive Systems Conference: Digital Wellbeing*	–	85–99
Benaddi H., Jouhari M., Ibrahimi K., Benslimane A., Amhoud E.M.	Adversarial Attacks Against IoT Networks using Conditional GAN based Learning	2022	*2022 IEEE Global Communications Conference, GLOBECOM 2022 – Proceedings*		2788–2793
Berridge C., Grigorovich A.	Algorithmic harms and digital ageism in the use of surveillance technologies in nursing homes	2022	*Frontiers in Sociology*	7	–
Bharti S.K., Inani H., Gupta R.K.	Smart Photo Editor using Generative Adversarial Network: A Machine Learning Approach	2022	*Proceedings – 2022 IEEE 2nd International Symposium on Sustainable Energy, Signal Processing and Cyber Security, iSSSC 2022*	–	–
Bhattacharyya A., Bhaik D., Kumar S., Thakur P., Sharma R., Pachori R.B.	A deep learning based approach for automatic detection of COVID-19 cases using chest X-ray images	2022	*Biomedical Signal Processing and Control*	71	–
Bhowmik S., Barrett A., Ke F., Yuan X., Southerland S., Dai C.-P., West L., Dai Z.	Simulating students: An AI chatbot for teacher training	2022	*Proceedings of International Conference of the Learning Sciences, ICLS*		1972–1973
Bidwai P., Gite S., Pahuja K., Kotecha K.	A Systematic Literature Review on Diabetic Retinopathy Using an Artificial Intelligence Approach	2022	*Big Data and Cognitive Computing*	6,4	–

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Bielik M., Schneider S., Koenig R.	Adaptive master plans: Flexible modular design strategies	2022	*Artificial Intelligence in Urban Planning and Design: Technologies, Implementation, and Impacts*	–	323–337
Bilquise G., Ibrahim S., Shaalan K.	Emotionally Intelligent Chatbots: A Systematic Literature Review	2022	*Human Behavior and Emerging Technologies*	2022	–
Bisht S., Shekhawat K., Upasani N., Jain R.N., Tiwaskar R.J., Hebbar C.	Transforming an Adjacency Graph into Dimensioned Floorplan Layouts	2022	*Computer Graphics Forum*	41,6	5–22
Bonadio E., Lucchi N., Mazziotti G.	Will Technology-Aided Creativity Force Us to Rethink Copyright's Fundamentals? Highlights from the Platform Economy and Artificial Intelligence	2022	*IIC International Review of Intellectual Property and Competition Law*	53,8	1174–1200
Borg M., Bengtsson J., Osterling H., Hagelborn A., Gagner I., Tomaszewski P.	Quality Assurance of Generative Dialog Models in an Evolving Conversational Agent Used for Swedish Language Practice	2022	*Proceedings – 1st International Conference on AI Engineering – Software Engineering for AI, CAIN 2022*	–	22–32
Breen J., Zucker K., Orsi N.M., Ravikumar N.	Assessing Domain Adaptation Techniques for Mitosis Detection in Multi-scanner Breast Cancer Histopathology Images	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13166 LNCS	14–22
Brocchini M., Mameli M., Balloni E., Sciucca L.D., Rossi L., Paolanti M., Frontoni E., Zingaretti P.	MONstEr: A Deep Learning-Based System for the Automatic Generation of Gaming Assets	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13373 LNCS	280–290
Budhiraja R., Kumar M., Das M.K., Bafila A.S., Singh S.	MeDiFakeD: Medical Deepfake Detection using Convolutional Reservoir Networks	2022	*2022 IEEE Global Conference on Computing, Power and Communication Technologies, GlobConPT 2022*	–	–
Bukhanovskii A.V.	Intelligent Technologies for Digital Transformation of Industrial Production	2022	*Doklady Mathematics*	106	S28–S34
Busby D., Berthet P., Akhiyarov D., Lapassade M.	3D-GAN to model uncertainty and to perform effective history matching of a complex turbidite field case	2022	*European Conference on the Mathematics of Geological Reservoirs 2022, ECMOR 2022*	–	–
Calamaro N., Levy M., Ben-Melech R., Shmilovitz D.	TNT Loss: A Technical and Nontechnical Generative Cooperative Energy Loss Detection System	2022	*Sensors*	22,18	–
Campbell C., Plangger K., Sands S., Kietzmann J.	Preparing for an Era of Deepfakes and AI-Generated Ads: A Framework for Understanding Responses to Manipulated Advertising	2022	*Journal of Advertising*	51,1	22–38
Campbell C., Plangger K., Sands S., Kietzmann J., Bates K.	How Deepfakes and Artificial Intelligence Could Reshape the Advertising Industry The Coming Reality of AI Fakes and Their Potential Impact on Consumer Behavior	2022	*Journal of Advertising Research*	62,3	241–251
Campbell N.H., Jr., Ilangovan H.S., Gregory I.M., Mikaelian S.S.	Data Augmentation for Intelligent Contingency Management Using Generative Adversarial Neural Networks	2022	*AIAA Science and Technology Forum and Exposition, AIAA SciTech Forum 2022*	–	–
Cao T.	Analysis of aerobic training posture using machine vision for body area networks	2022	*Wireless Networks*	–	–
Carchidi V.J.	Do submarines swim? Methodological dualism and anthropomorphizing AlphaGo	2022	*AI and Society*	–	–
Carrillo-Perez F., Pecho O.E., Morales J.C., Paravina R.D., Della Bona A., Ghinea R., Pulgar R., Pérez M.D.M., Herrera L.J.	Applications of artificial intelligence in dentistry: A comprehensive review	2022	*Journal of Esthetic and Restorative Dentistry*	34,1	259–280
Cerutti F.	Supporting Trustworthy Artificial Intelligence via Bayesian Argumentation	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13196 LNAI	377–388
Cetinic E., She J.	Understanding and Creating Art with AI: Review and Outlook	2022	*ACM Transactions on Multimedia Computing, Communications and Applications*	18,2	–
Chang X., Cai X., Dan Y., Song Y., Lu Q., Yang G., Nie S.	Self-supervised learning for multi-center magnetic resonance imaging harmonization without traveling phantoms	2022	*Physics in Medicine and Biology*	67,14	–
Charachon M., Cournède P.-H., Hudelot C., Ardon R.	Leveraging conditional generative models in a general explanation framework of classifier decisions	2022	*Future Generation Computer Systems*	132	223–238
Chase J., Goh S.T., Tran P., Lau H. C.	OFFICERS: Operational Framework for Intelligent Crime-and-Emergency Response Scheduling	2022	*Proceedings International Conference on Automated Planning and Scheduling, ICAPS*	32	444–452
Chattopadhyay A., Slocum S., Haeffele B.D., Vidal R., Geman D.	Interpretable by Design: Learning Predictors by Composing Interpretable Queries	2022	*IEEE Transactions on Pattern Analysis and Machine Intelligence*	–	1–14
Chau R.C.W., Chong M., Thu K.M., Chu N.S.P., Koohi-Moghadam M., Hsung R.T.-C., McGrath C., Lam W.Y.H.	Artificial intelligence-designed single molar dental prostheses: A protocol of prospective experimental study	2022	*PLoS ONE*	17,45083	–
Chaudhuri A., Talukdar J., Chakrabarty K.	Special Session: Fault Criticality Assessment in AI Accelerators	2022	*Proceedings of the IEEE VLSI Test Symposium*	–	–
Chaudhuri A., Talukdar J., Su F., Chakrabarty K.	Functional Criticality Analysis of Structural Faults in AI Accelerators	2022	*IEEE Transactions on Computer–Aided Design of Integrated Circuits and Systems*	41,12	5657–5670

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Chen G., Zhang J.	Applying Artificial Intelligence and Deep Belief Network to predict traffic congestion evacuation performance in smart cities	2022	*Applied Soft Computing*	121,	–
Chen H., Pieptea L.F., Ding J.	Construction and Evaluation of a High-Quality Corpus for Legal Intelligence Using Semiautomated Approaches	2022	*IEEE Transactions on Reliability*	71,2	657–673
Chen H., Zhang C., Li J., Yu P.S., Jing N.	KGGen: A Generative Approach for Incipient Knowledge Graph Population	2022	*IEEE Transactions on Knowledge and Data Engineering*	34,5	2254–2267
Chen S., Zhong Y., Du R.	Automatic composition of Guzheng (Chinese Zither) music using long short-term memory network (LSTM) and reinforcement learning (RL)	2022	*Scientific Reports*	12,1	–
Choi Y.	The Curious Case of Commonsense Intelligence	2022	*Daedalus*	151,2	139–154
Chomsky N.	Genuine Explanation and the Strong Minimalist Thesis	2022	*Cognitive Semantics*	8,3	347–365
Choudhury C., Arul Murugan N., Priyakumar U.D.	Structure-based drug repurposing: Traditional and advanced AI/ML-aided methods	2022	*Drug Discovery Today*	27,7	1847–1861
Chung J.J.Y.	Artistic User Expressions in AI-powered Creativity Support Tools	2022	*UIST 2022 Adjunct – Adjunct Proceedings of the 35th Annual ACM Symposium on User Interface Software and Technology*	–	–
Chung J.J.Y., Chang M., Adar E.	Gestural Inputs as Control Interaction for Generative Human-AI Co-Creation	2022	*CEUR Workshop Proceedings*	3124	46–55
Chung J.J.Y., Kim W., Yoo K.M., Lee H., Adar E., Chang M.	TaleBrush: Sketching Stories with Generative Pretrained Language Models	2022	*Conference on Human Factors in Computing Systems – Proceedings*	–	–
Chung Y.G., Jeon Y., Yoo S., Kim H., Hwang H.	Big data analysis and artificial intelligence in epilepsy – common data model analysis and machine learning-based seizure detection and forecasting	2022	*Clinical and Experimental Pediatrics*	65,6	272–282
Claro Y.P., Dal Santo N., Krishnan V., Kovscek A.	Analyzing X-Ray CT Images from Unconventional Reservoirs Using Deep Generative Models	2022	*SPE Western Regional Meeting Proceedings*	–	–
Cobb A., Roy A., Elenius D., Jha S.	Trinity AI Co-Designer for Hierarchical Oracle-guided Design of Cyber-Physical Systems	2022	*Proceedings – 4th Workshop on Design Automation for CPS and IoT, DESTION 2022*	–	42–44
Cobb A., Roy A., Elenius D., Koneripalli K., Jha S.	On Diverse System-Level Design Using Manifold Learning and Partial Simulated Annealing	2022	*Proceedings of the Design Society*	2	1541–1548
Cole M.L., Stavros J.M., Cox J., Stavros A.	Measuring Strengths, Opportunities, Aspirations, and Results: Psychometric Properties of the 12-Item SOAR Scale	2022	*Frontiers in Psychology*	13	–
Connolly P.	Instability and Uncertainty Are Critical for Psychotherapy: How the Therapeutic Alliance Opens Us Up	2022	*Frontiers in Psychology*	12	–
Cooper A.F., Vidan G.	Making the Unaccountable Internet: The Changing Meaning of Accounting in the Early ARPANET	2022	*ACM International Conference Proceeding Series*	–	726–742
Cornia M., Baraldi L., Cucchiara R.	Explaining transformer-based image captioning models: An empirical analysis	2022	*AI Communications*	35,2	111–129
Correia A., Lindley S.	Collaboration in relation to Human-AI Systems: Status, Trends, and Impact	2022	*Proceedings – 2022 IEEE International Conference on Big Data, Big Data 2022*	–	3417–3422
Coyner A.S., Chen J.S., Chang K., Singh P., Ostmo S., Chan R.V.P., Chiang M.F., Kalpathy-Cramer J., Campbell J.P., Imaging and Informatics in Retinopathy of Prematurity Consortium	Synthetic Medical Images for Robust, Privacy-Preserving Training of Artificial Intelligence: Application to Retinopathy of Prematurity Diagnosis	2022	*Ophthalmology Science*	2,2	–
Crespo S., McCormick F.	Augmenting Digital Nature: Generative Art as a Constructive Feedback Loop	2022	*Architectural Design*	92,3	54–59
Cui M., Kim M., Choi S., Lee S.	The Usage and Impact of GAN in Graphic Design	2022	*Archives of Design Research*	35,4	285–307
Dang H., Mecke L., Buschek D.	GANSlider: How Users Control Generative Models for Images using Multiple Sliders with and without Feedforward Information	2022	*Conference on Human Factors in Computing Systems – Proceedings*	–	–
Dani T., Muhamad J., Nurzaman M.Z., Kesumaningrum R., Sulistiani S., Pangestu A.D.	Artificial intelligence generated solar farside magnetogram using conditional generative adversarial network	2022	*Journal of Physics: Conference Series*	2214,1	–
Danry V., Leong J., Pataranutaporn P., Tandon P., Liu Y., Shilkrot R., Punpongsanon P., Weissman T., Maes P., Sra M.	AI-Generated Characters: Puting Deepfakes to Good Use	2022	*Conference on Human Factors in Computing Systems – Proceedings*	–	–
Das P., Varshney L.R.	Explaining Artificial Intelligence Generation and Creativity: Human interpretability for novel ideas and artifacts	2022	*IEEE Signal Processing Magazine*	39,4	85–95

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Dash S., Balasubramanian V.N., Sharma A.	Evaluating and Mitigating Bias in Image Classifiers: A Causal Perspective Using Counterfactuals	2022	*Proceedings – 2022 IEEE/CVF Winter Conference on Applications of Computer Vision, WACV 2022*	–	3879–3888
Dave B., Patel S., Shivani R., Purohit S., Chaudhury B.	Synthetic data generation using generative adversarial network for tokamak plasma current quench experiments	2022	*Contributions to Plasma Physics*	–	–
de Boer A., Hommelsheim R., Leeftink D.	A Bayesian Framework for Evaluating Evolutionary Art	2022	*Communications in Computer and Information Science*	1530 CCIS	141–152
de Pontes R.G., Gomes H.M., Seabra I.S.R.	Particle swarm optimization for procedural content generation in an endless platform game	2022	*Entertainment Computing*	43,	–
del Campo M., Manninger S.	Strange, But Familiar Enough: The Design Ecology of Neural Architecture	2022	*Architectural Design*	92,3	38–45
Dele Owolabi J., Malagwi D., Oyeyipo O., Ola-Ade E.O., Tunji-Olayeni P.F.	Application of artificial intelligence in the Nigerian building and construction industry	2022	*International Journal of Advanced and Applied Sciences*	9,10	33–39
Della Sciucca L., Balloni E., Mameli M., Frontoni E., Zingaretti P., Paolanti M.	StyleTrendGAN: A Deep Learning Generative Framework for Fashion Bag Generation	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13374 LNCS	191–202
Derisma, Rokhman N., Usuman I.	Systematic Review of the Early Detection and Classification of Plant Diseases Using Deep Learning	2022	*IOP Conference Series: Earth and Environmental Science*	1097,1	–
Di Filippo J.I., Cavasotto C.N.	Guided structure-based ligand identification and design via artificial intelligence modeling	2022	*Expert Opinion on Drug Discovery*	17,1	71–78
Dijkstra R., Genç Z., Kayal S., Kamps J.	Reading Comprehension Quiz Generation using Generative Pre-trained Transformers	2022	*CEUR Workshop Proceedings*	3192,	–
Dimitriadis I., Zaninovic N., Badiola A.C., Bormann C.L.	Artificial intelligence in the embryology laboratory: a review	2022	*Reproductive BioMedicine Online*	44,3	435–448
Djouima H., Zitouni A., Megherbi A.C., Sbaa S.	Classification of Breast Cancer Histopathological Images using DensNet201	2022	*2022 7th International Conference on Image and Signal Processing and their Applications, ISPA 2022 – Proceedings*	–	–
Dong X., Hua R.	GAN Based Image Inpainting Methods: A Taxonomy	2022	*Proceedings – 2022 3rd International Conference on Electronic Communication and Artificial Intelligence, IWECAI 2022*	–	145–150
Douglas D.M., Lacey J., Howard D.	Ethical responsibility and computational design: bespoke surgical tools as an instructive case study	2022	*Ethics and Information Technology*	24,1	–
Duan H., Wu X., Cai W.	Crypto-Dropout: To Create Unique User-Generated Content Using Crypto Information in Metaverse	2022	*2022 IEEE 24th International Workshop on Multimedia Signal Processing, MMSP 2022*	–	–
Duan Q., Qi L., Cao R., Si P.	Research on Sustainable Reuse of Urban Ruins Based on Artificial Intelligence Technology: A Study of Guangzhou	2022	*Sustainability (Switzerland)*	14,22	–
Duan W., Zhang Z., Yu Y., Oyama K.	Interpretable Melody Generation from Lyrics with Discrete-Valued Adversarial Training	2022	*MM 2022 – Proceedings of the 30th ACM International Conference on Multimedia*		6973–6975
Dung N.Q., Kim H.	Generating High-Resolution Fire Images with Controllable Attributes via Generative Adversarial Networks	2022	*International Conference on Control, Automation and Systems*	November	348–353
Egi Y., Hajyzadeh M., Eyceyurt E.	Drone-Computer Communication Based Tomato Generative Organ Counting Model Using YOLO V5 and Deep-Sort	2022	*Agriculture (Switzerland)*	12,9	–
Elghaish F., Chauhan J.K., Matarneh S., Pour Rahimian F., Hosseini M.R.	Artificial intelligence-based voice assistant for BIM data management	2022	*Automation in Construction*	140	–
Enßlin T.	Information Field Theory and Artificial Intelligence	2022	*Entropy*	24,3	–
Eroğlu R., Gül L.F.	Architectural Form Explorations through Generative Adversarial Networks: Predicting the potentials of StyleGAN	2022	*Proceedings of the International Conference on Education and Research in Computer Aided Architectural Design in Europe*	2	575–582
Evirgen N., Chen X.'.	GANzilla: User-Driven Direction Discovery in Generative Adversarial Networks	2022		–	–
Fang B., Chen G., Ouyang G., Chen J., Kou R., Wang L.	Content-Invariant Dual Learning for Change Detection in Remote Sensing Images	2022	*IEEE Transactions on Geoscience and Remote Sensing*	60	–
Fang W.W., Cao Z.H., Yu D.K., Wang X., Ma Z.X., Lan B., Song C.Y., Xu Z.W.	A Lightweight Deep Learning-Based Algorithm for Array Imperfection Correction and DOA Estimation	2022	*Journal of Communications and Information Networks*	7,3	296–308
Fang X., Li Z., Yang G.	A novel approach to generating high-resolution adversarial examples	2022	*Applied Intelligence*	52,2	1289–1305
Farahi B.	AI-Controlled Robot Masks: Resisting Patriarchal Oppression	2022	*Architectural Design*	92,3	72–79
Ferrari F., McKelvey F.	Hyperproduction: a social theory of deep generative models	2022	*Distinktion*	–	–
Finck T., Li H., Schlaeger S., Grundl L., Sollmann N., Bender	Uncertainty-Aware and Lesion-Specific Image Synthesis in Multiple Sclerosis	2022	*Frontiers in Neuroscience*	16	–

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
B., Bürkle E., Zimmer C., Kirschke J., Menze B., Mühlau M., Wiestler B.	Magnetic Resonance Imaging: A Multicentric Validation Study				
Firdaus M., Chauhan H., Ekbal A., Bhattacharyya P.	EmoSen: Generating Sentiment and Emotion Controlled Responses in a Multimodal Dialogue System	2022	*IEEE Transactions on Affective Computing*	13,3	1555–1566
Firdaus M., Thangavelu N., Ekbal A., Bhattacharyya P.	I enjoy writing and playing, do you: A Personalized and Emotion Grounded Dialogue Agent using Generative Adversarial Network	2022	*IEEE Transactions on Affective Computing*	–	–
Franklin M., Ashton H., Awad E., Lagnado D.	Causal Framework of Artificial Autonomous Agent Responsibility	2022	*AIES 2022 – Proceedings of the 2022 AAAI/ACM Conference on AI, Ethics, and Society*	–	276–284
Fuhr A.S., Sumpter B.G.	Deep Generative Models for Materials Discovery and Machine Learning-Accelerated Innovation	2022	*Frontiers in Materials*	9	–
Gacche P., Kokare M., Rathod S. M., Arulprasath K., Rathod S., Sharma A.	Foreign Object Detection and Classification using AI and ML for Radio Images	2022	*2022 International Conference on Signal and Information Processing, IConSIP 2022*	–	–
Ganguli D., Hernandez D., Lovitt L., Askell A., Bai Y., Chen A., Conerly T., Dassarma N., Drain D., Elhage N., El Showk S., Fort S., Hatfield-Dodds Z., Henighan T., Johnston S., Jones A., Joseph N., Kernian J., Kravec S., Mann B., Nanda N., Ndousse K., Olsson C., Amodei D., Brown T., Kaplan J., McCandlish S., Olah C., Amodei D., Clark J.	Predictability and Surprise in Large Generative Models	2022	*ACM International Conference Proceeding Series*	–	1747–1764
Gao K., Chang C.-C., Horng J.-H., Echizen I.	Steganographic secret sharing via AI-generated photorealistic images	2022	*Eurasip Journal on Wireless Communications and Networking*	2022,1	–
Garde A., Suratkar S., Kazi F.	AI Based Deepfake Detection	2022	*2022 IEEE 1st International Conference on Data, Decision and Systems, ICDDS 2022*	–	–
Gareev D., Glassl O., Nouzri S.	Using GANs to Generate Lyric Videos	2022	*IFAC–PapersOnLine*	55,10	3292–3297
Gaskell A., Miao Y., Toni F., Specia L.	Logically Consistent Adversarial Attacks for Soft Theorem Provers	2022	*IJCAI International Joint Conference on Artificial Intelligence*	–	4129–4135
Ge X., Goodwin R.T., Yu H., Romero P., Abdelrahman O., Sudhalkar A., Kusuma J., Cialdella R., Garg N., Varshney L.R.	Accelerated Design and Deployment of Low-Carbon Concrete for Data Centers	2022	*ACM International Conference Proceeding Series*	Par F180472	340–352
Geck K.	Knitting Algorithmic Assemblages	2022	*Textile: The Journal of Cloth and Culture*	–	–
Ghajargar M., Bardzell J., Lagerkvist L.	A Redhead Walks into a Bar: Experiences of Writing Fiction with Artificial Intelligence	2022	*ACM International Conference Proceeding Series*	–	230–241
Grabe I., González-Duque M., Risi S., Zhu J.	Towards a Framework for Human-AI Interaction Patterns in Co-Creative GAN Applications	2022	*CEUR Workshop Proceedings*	3124	92–102
Granot N., Feinstein B., Shocher A., Bagon S., Irani M.	Drop the GAN: In Defense of Patches Nearest Neighbors as Single Image Generative Models	2022	*Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*	June	13450–13459
Guljajeva V., Sola M.C.	POSTcard Landscapes from Lanzarote	2022	*ACM International Conference Proceeding Series*	–	634–636
Gupta A., Das N.	ProdRev: A DNN framework for empowering customers using generative pre-trained transformers	2022	*2022 International Conference on Decision Aid Sciences and Applications, DASA 2022*	–	895–899
Gupta R.R.	Application of Artificial Intelligence and Machine Learning in Drug Discovery	2022	*Methods in Molecular Biology*	2390	113–124
Gupta S., Menon V., Baudry J.	Wavelet-based Spectral Analysis For Protein Conformation Selection and Prediction Using AI in Drug Discovery Applications	2022	*Proceedings – 2022 IEEE International Conference on Bioinformatics and Biomedicine, BIBM 2022*	–	2595–2602
Hagos Y.B., Sobhani F., Castillo S. P., Hall A.H., AbdulJabbar K., Salgado R., Harmon B., Gallagher K., Kilgore M., King L. M., Marks J.R., Maley C., Horlings H.M., West R., Hwang E.S., Yuan Y.	DCIS AI-TIL: Ductal Carcinoma In Situ Tumour Infiltrating Lymphocyte Scoring Using Artificial Intelligence	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13602 LNCS	164–175
Halici S.M., Gul L.F.	Utilizing Generative Adversarial Networks for Augmenting Architectural Massing Studies: AI-assisted Mixed Reality	2022	*Proceedings of the International Conference on Education and Research in Computer Aided Architectural Design in Europe*	1	323–330
Hanafi A., Bouhorma M., Elaachak L.	Machine Learning-BASED AUGMENTED REALITY FOR IMPROVED TEXT GENERATION THROUGH RECURRENT NEURAL NETWORKS	2022	*Journal of Theoretical and Applied Information Technology*	100,2	518–530
Hanai Y., Ishihata H., Zhang Z., Maruyama R., Kasai T., Kameda H., Sugiyama T.	Temporal and Locational Values of Images Affecting the Deep Learning of Cancer Stem Cell Morphology	2022	*Biomedicines*	10,5	–

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Harteveld C., Madkour A., Marsella S.	Towards Non-Technical Designer Control over PCG Systems: Investigating an Example-Based Mechanism for Controlling Graph Grammars	2022	*ACM International Conference Proceeding Series*	–	1–12
Hartung J., Dold P.M., Jahn A., Heizmann M.	Analysis of AI-Based Single-View 3D Reconstruction Methods for an Industrial Application	2022	*Sensors*	22,17	–
Hassan S.Z., Salehi P., Røed R.K., Halvorsen P., Baugerud G.A., Johnson M.S., Lison P., Riegler M., Lamb M.E., Griwodz C., Sabet S.S.	Towards an AI-driven talking avatar in virtual reality for investigative interviews of children	2022	*GameSys 2022 – Proceedings of the 2022 Game Systems Workshop, Part of MMSys 2022*	–	9–15
Hattori S., Aiba K., Takahara M.	R2-B2: A Metric of Synthesized Image's Photorealism by Regression Analysis based on Recognized Objects' Bounding Box	2022	*2022 Joint 12th International Conference on Soft Computing and Intelligent Systems and 23rd International Symposium on Advanced Intelligent Systems, SCIS and ISIS 2022*	–	
He F., Huang Y., Wang H.	iPLAN: Interactive and Procedural Layout Planning	2022	*Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*	June	7783–7792
He W.	Sequential Masterplanning: Using Urban-GANs	2022	*Architectural Design*	92,3	100–107
He W., Chen T.	Scalable Online Disease Diagnosis via Multi-Model-Fused Actor-Critic Reinforcement Learning	2022	*Proceedings of the ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*	–	4695–4703
Heo S., Ko J., Kim S., Jeong C., Hwangbo S., Yoo C.	Explainable AI-driven net-zero carbon roadmap for petrochemical industry considering stochastic scenarios of remotely sensed offshore wind energy	2022	*Journal of Cleaner Production*	379	–
Hernandez M., Epelde G., Alberdi A., Cilla R., Rankin D.	Synthetic data generation for tabular health records: A systematic review	2022	*Neurocomputing*	493	28–45
Hou Y.	AI Music Therapist: A Study on Generating Specific Therapeutic Music based on Deep Generative Adversarial Network Approach	2022	*2022 IEEE 2nd International Conference on Electronic Technology, Communication and Information, ICETCI 2022*	–	1277–1281
Houde S., Ross S.I., Muller M., Agarwal M., Martinez F., Richards J., Talamadupula K., Weisz J.D.	Opportunities for Generative AI in UX Modernization	2022	*CEUR Workshop Proceedings*	3124	81–91
Hu J., Li Y.	Electrocardiograph Based Emotion Recognition via WGAN-GP Data Enhancement and Improved CNN	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13455 LNAI	155–164
Hu Z., Huang S., Zhu X., Sun F., Zhang B., Hu X.	Adversarial Texture for Fooling Person Detectors in the Physical World	2022	*Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*	June	13297–13306
Huang C.-F., Huang C.-Y.	CVAE-GAN Emotional AI Music System for Car Driving Safety	2022	*Intelligent Automation and Soft Computing*	32,3	1939–1953
Huang H.-I., Shih C.-S., Yang Z.-L.	Automated video editing based on learned styles using LSTM-GAN	2022	*Proceedings of the ACM Symposium on Applied Computing*		73–80
Huang J., Zhen H.-L., Wang N., Mao H., Yuan M., Huang Y.	Neural Fault Analysis for SAT-based ATPG	2022	*Proceedings – International Test Conference*	September	36–45
Hung M.C., Nakatsu R., Tosa N., Kusumi T.	Learning of art style using AI and its evaluation based on psychological experiments	2022	*International Journal of Arts and Technology*	14,3	171–191
Hwang W.-Y., Nurtantyana R.	The integration of multiple recognition technologies and artificial intelligence to facilitate EFL writing in authentic contexts	2022	*6th International Conference on Information Technology, InCIT 2022*	–	379–383
Jacob P., Zablocki É., Ben-Younes H., Chen M., Pérez P., Cord M.	STEEX: Steering Counterfactual Explanations with Semantics	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13672 LNCS,	387–403
Jalui K., Jagtap A., Sharma S., Mary G., Fernandes R., Kolhekar M.	Synthetic Content Detection in Deepfake Video using Deep Learning	2022	*2022 IEEE 3rd Global Conference for Advancement in Technology, GCAT 2022*		
James T., Hristozov D.	Deep Learning and Computational Chemistry	2022	*Methods in Molecular Biology*	2390	125–151
Javed R.T., Nasir O., Borit M., Vanhée L., Zea E., Gupta S., Vinuesa R., Qadir J.	Get out of the BAG! Silos in AI Ethics Education: Unsupervised Topic Modeling Analysis of Global AI Curricula	2022	*Journal of Artificial Intelligence Research*	73	933–965
Jeong J.J., Tariq A., Adejumo T., Trivedi H., Gichoya J.W., Banerjee I.	Systematic Review of Generative Adversarial Networks (GANs) for Medical Image Classification and Segmentation	2022	*Journal of Digital Imaging*	35,2	137–152
Jia F., Yang S.	Video face swap with DeepFaceLab	2022	*Proceedings of SPIE – The International Society for Optical Engineering*	12168	–
Jilani U., Asif M., Rashid M., Siddique A.A., Talha S.M.U., Aamir M.	Traffic Congestion Classification Using GAN-Based Synthetic Data Augmentation and a Novel 5-Layer Convolutional Neural Network Model	2022	*Electronics (Switzerland)*	11,15	–
Jonsson M., Tholander J.	Cracking the code: Co-coding with AI in creative programming education	2022	*ACM International Conference Proceeding Series*	–	5–14

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Ju Y., Jia S., Ke L., Xue H., Nagano K., Lyu S.	FUSING GLOBAL AND LOCAL FEATURES FOR GENERALIZED AI-SYNTHESIZED IMAGE DETECTION	2022	*Proceedings – International Conference on Image Processing, ICIP*	–	3465–3469
Jung H.-G., Kang S.-H., Kim H.-D., Won D.-O., Lee S.-W.	Counterfactual explanation based on gradual construction for deep networks	2022	*Pattern Recognition*	132	–
Kang N., Qiu S., Zhang S., Li Z., Xia S.	PILC: Practical Image Lossless Compression with an End-to-end GPU Oriented Neural Framework	2022	*Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*	June	3729–3738
Kang S.-G., Morrone J.A., Weber J. K., Cornell W.D.	Analysis of Training and Seed Bias in Small Molecules Generated with a Conditional Graph-Based Variational Autoencoder—Insights for Practical AI-Driven Molecule Generation	2022	*Journal of Chemical Information and Modeling*	62,4	801–816
Kanwal S., Tehsin S., Saif S.	EXPOSING AI GENERATED DEEPFAKE IMAGES USING SIAMESE NETWORK WITH TRIPLET LOSS	2022	*Computing and Informatics*	41,6	1541–1562
Karadag I., Güzelci O.Z., Alaçam S.	EDU-AI: a twofold machine learning model to support classroom layout generation	2022	*Construction Innovation*	23,4	898–914
Kather J.N., Ghaffari Laleh N., Foersch S., Truhn D.	Medical domain knowledge in domain-agnostic generative AI	2022	*npj Digital Medicine*	5,1	–
Katole A.L., Mangsuli P., Gune O., Shakeel M.S., Neelakanteswara A., Abubakar A.	Deep learning-based raster digitization engine	2022	*SEG Technical Program Expanded Abstracts*	August	1624–1628
Kaur S., Kaur M.	Using Deep Learning Techniques for Diagnosis & Treatment with COVID-19 & AI Technology	2022	*Proceedings of the 2022 11th International Conference on System Modeling and Advancement in Research Trends, SMART 2022*	–	1204–1207
Khadka A., Sthapit S., Epiphaniou G., Maple C.	Resilient Machine Learning in Space Systems: Pose Estimation as a Case Study	2022	*IEEE Aerospace Conference Proceedings*	–	1–9
Khalida R., Madenda S., Harmanto S., Wiryana I.M.	Concatenate Word Embedding for Text to Image through Generative Adversarial Network	2022	*Proceedings – 4th International Conference on Informatics, Multimedia, Cyber and Information System, ICIMCIS 2022*	–	259–264
Khezri B.	Free Energy Principle (FEP)	2022	*Contributions to Management Science*	–	33–41
Khezri B.	'Thinking Born of Curiosity, Revolt, and Change'	2022	*Contributions to Management Science*	–	3–6
Khoo B., Phan R.C.W., Lim C.-H.	Deepfake attribution: On the source identification of artificially generated images	2022	*Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*	12,3	–
Kiessling F., Schulz V.	Perspectives of Evidence-Based Therapy Management	2022	*RoFo Fortschritte auf dem Gebiet der Rontgenstrahlen und der Bildgebenden Verfahren*	194,7	728–736
Kim J., Choi Y., Uh Y.	Feature Statistics Mixing Regularization for Generative Adversarial Networks	2022	*Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*	June	11284–11293
Kim Y., Ha J.-W.	CONTRASTIVE FINE-GRAINED CLASS CLUSTERING VIA GENERATIVE ADVERSARIAL NETWORKS	2022	*ICLR 2022 – 10th International Conference on Learning Representations*	–	–
Kim Y., Lee W.	Distributed Raman Spectrum Data Augmentation System Using Federated Learning with Deep Generative Models	2022	*Sensors*	22,24	–
Kodipalli A., Devi S., Dasar S., Ismail T.	Segmentation and classification of ovarian cancer based on conditional adversarial image to image translation approach	2022	*Expert Systems*	–	e13193
Komatsu H., Maeno A., Watanabe E.	Origin of the ease of association of color names: Comparison between humans and AI	2022	*i–Perception*	13,5	–
Komori S., Cross D.J., Mills M., Ouchi Y., Nishizawa S., Okada H., Norikane T., Thientunyakit T., Anzai Y., Minoshima S.	Deep-learning prediction of amyloid deposition from early-phase amyloid positron emission tomography imaging	2022	*Annals of Nuclear Medicine*	36,10	913–921
Kumar A., Hu A., Nichyporuk B., Falet J.-P.R., Arnold D.L., Tsaftaris S., Arbel T.	Counterfactual Image Synthesis for Discovery of Personalized Predictive Image Markers	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13602 LNCS	113–124
Kumar A., Madaan M., Kumar S., Saha A., Gupta K.	Handwriting Generation and Synthesis using Recurrent Neural Networks	2022	*2022 13th International Conference on Computing Communication and Networking Technologies, ICCCNT 2022*	–	1–8
Kumar A., Tamboli D., Pande S., Banerjee B.	RSINet: Inpainting Remotely Sensed Images Using Triple GAN Framework	2022	*International Geoscience and Remote Sensing Symposium (IGARSS)*	July	143–146
Kumar L., Jain M.	A Novel Image Super-Resolution Reconstruction Framework Using the AI Technique of Dual Generator Generative Adversarial Network (GAN)	2022	*Journal of Universal Computer Science*	28,9	967–983
Kumar S.A., Ananda Kumar T.D., Beeraka N.M., Pujar G.V., Singh M., Narayana Akshatha H.S., Bhagyalalitha M.	Machine learning and deep learning in data-driven decision making of drug discovery and challenges in high-quality data acquisition in the pharmaceutical industry	2022	*Future Medicinal Chemistry*	14,4	245–270
Kundu S., Basu K.	Detecting Functional Safety Violations in Online AI Accelerators	2022	*Proceedings – 2022 IEEE 28th International Symposium on On–Line Testing and Robust System Design, IOLTS 2022*	–	1–4

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Kurniawan A., Ohsita Y., Murata M.	Experiments on Adversarial Examples for Deep Learning Model Using Multimodal Sensors	2022	*Sensors*	22,22	–
Kwon J.-M., Jo Y.-Y., Lee S.Y., Kang S., Lim S.-Y., Lee M.S., Kim K.-H.	Artificial Intelligence-Enhanced Smartwatch ECG for Heart Failure-Reduced Ejection Fraction Detection by Generating 12-Lead ECG	2022	*Diagnostics*	12,3	–
Lai Y.S., Neill D., Płoskoń M., Ringer F.	Explainable machine learning of the underlying physics of high-energy particle collisions	2022	*Physics Letters, Section B: Nuclear, Elementary Particle and High–Energy Physics*	829,	–
Laidlaw C., Dragan A.	The boltzmann policy distribution: accounting for systematic suboptimality in human models	2022	*ICLR 2022 – 10th International Conference on Learning Representations*	–	–
Laino M.E., Cancian P., Politi L.S., Della Porta M.G., Saba L., Savevski V.	Generative Adversarial Networks in Brain Imaging: A Narrative Review	2022	*Journal of Imaging*	8,4	83
Lajko M., Csuvik V., Vidacs L.	Towards JavaScript program repair with Generative Pre-trained Transformer (GPT-2)	2022	*Proceedings of the Third International Workshop on Automated Program Repair*		61–68
Lajkó M., Horváth D., Csuvik V., Vidács L.	Fine-Tuning GPT-2 to Patch Programs, Is It Worth It?	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13380 LNCS	79–91
Lamba S., Baliyan A., Kukreja V.	GAN based image augmentation for increased CNN performance in Paddy leaf disease classification	2022	*2022 2nd International Conference on Advance Computing and Innovative Technologies in Engineering, ICACITE 2022*		2054–2059
Landes J.	Spacemaker.Ai: Using AI in developing urban block variations	2022	*Artificial Intelligence in Urban Planning and Design: Technologies, Implementation, and Impacts*		263–291
Lawrance B., Lee H., Park E., Cho I.-H., Moon Y.-J., Lee J.-Y., Shanmugaraju A., Rahman S.	Generation of Solar Coronal White-light Images from SDO/AIA EUV Images by Deep Learning	2022	*Astrophysical Journal*	937,2	–
Le Coz A., Herbin S., Adjed F.	Leveraging generative models to characterize the failure conditions of image classifiers	2022	*CEUR Workshop Proceedings*	3215	–
Leach N.	Architectural Hallucinations: What Can AI Tell Us About the Mind of an Architect?	2022	*Architectural Design*	92,3	66–71
Lee B.K.	An AI Based Algorithm for Restoration of Damaged Cultural Properties	2022	*Journal of System and Management Sciences*	12,1	1–12
Lee C., Kim S., Kim J., Lim C., Jung M.	Challenges of diet planning for children using artificial intelligence	2022	*Nutrition Research and Practice*	16,6	801–812
Lee C.-Y., Yoo Y., Zhang B.-T.	PlaceNet: Neural Spatial Representation Learning with Multimodal Attention	2022	*ProceedingsoftheThirty–FirstInternational JointConferenceonArtificialIntelligence(IJCAI–22)*	–	1031–1038
Lee G., Kim H., Kim J., Kim S., Ha J.-W., Choi Y.	Generator Knows What Discriminator Should Learn in Unconditional GANs	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13677 LNCS	406–422
Lee J., Sung D., Chung Y.K., Song S.B., Huh J.	Unveiling two-dimensional magnesium hydride as a hydrogen storage material via a generative adversarial network	2022	*Nanoscale Advances*	4,10	2332–2338
Lee M., Liang P., Yang Q.	CoAuthor: Designing a Human-AI Collaborative Writing Dataset for Exploring Language Model Capabilities	2022	*Conference on Human Factors in Computing Systems – Proceedings*	–	1–19
Lee S.-C., Jang Y., Park C.-H., Seo Y.-S.	Feature Analysis for Detecting Mobile Application Review Generated by AI-Based Language Model	2022	*Journal of Information Processing Systems*	18,5	65–664
Lee S.H., Leeghim H.	Synthetic Infra-Red Image Evaluation Methods by Structural Similarity Index Measures	2022	*Electronics (Switzerland)*	11,20	–
Lee Y.K.	How complex systems get engaged in fashion design creation: Using artificial intelligence	2022	*Thinking Skills and Creativity*	46	–
Lefcourt S., Gordon N., Wong H., Falco G.	Robustness Assurance Quotient: Demonstrating Context Matters for AI Performance and ML Security	2022	*Proceeding – 2022 IEEE International Conference on Assured Autonomy, ICAA 2022*	–	21–27
Lehmann F., Markert N., Dang H., Buschek D.	Suggestion Lists vs. Continuous Generation: Interaction Design for Writing with Generative Models on Mobile Devices Affect Text Length, Wording and Perceived Authorship	2022	*ACM International Conference Proceeding Series*	–	192–208
Leng C., Yang C., Chen S., Wu Q., Peng Y.	GAN for Load Estimation and Traffic-Aware Network Selection for 5G Terminals	2022	*IEEE Internet of Things Journal*	9,17	16353–16362
Li C., Xu H., Tian J., Wang W., Yan M., Bi B., Ye J., Chen H., Xu G., Cao Z., Zhang J., Huang S., Huang F., Zhou J., Si L.	mPLUG: Effective and Efficient Vision-Language Learning by Cross-modal Skip-connections	2022	*Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing, EMNLP 2022*	–	7241–7259
Li L.-H., Jiang L.-Q., Peng Y.-F., Liu Y.-S., Chung K.-L.	Combining Conditional Generative Adversarial Networks and YOLOv4 for Mango Classification	2022	*Proceedings – 2022 International Conference on Technologies and Applications of Artificial Intelligence, TAAI 2022*	–	54–59

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Li T., Xie S., Zeng Z., Dong M., Liu A.	ATPS: An AI Based Trust-Aware and Privacy-Preserving System for Vehicle Managements in Sustainable VANETs	2022	*IEEE Transactions on Intelligent Transportation Systems*	23,10	19837–19851
Li Z., Wang C.-X., Huang J., Zhou W., Huang C.	A GAN-LSTM based AI Framework for 6G Wireless Channel Prediction	2022	*IEEE Vehicular Technology Conference*	–	1–5
Liao J., Huang L., Qu M., Chen B., Wang G.	Artificial Intelligence in Coronary CT Angiography: Current Status and Future Prospects	2022	*Frontiers in Cardiovascular Medicine*	9	–
Lim J.S., Hong M., Lam W.S.T., Zhang Z., Teo Z.L., Liu Y., Ng W. Y., Foo L.L., Ting D.S.W.	Novel technical and privacy-preserving technology for artificial intelligence in ophthalmology	2022	*Current Opinion in Ophthalmology*	33,3	174–187
Liu A., Swayamdipta S., Smith N. A., Choi Y.	WANLI: Worker and AI Collaboration for Natural Language Inference Dataset Creation	2022	*Findings of the Association for Computational Linguistics: EMNLP 2022*	–	6855–6876
Liu G., Zhang W., Li X., Fan K., Yu S.	VulnerGAN: a backdoor attack through vulnerability amplification against machine learning-based network intrusion detection systems	2022	*Science China Information Sciences*	65,7	–
Liu J., Nogueira M., Fernandes J., Kantarci B.	Adversarial Machine Learning: A Multilayer Review of the State-of-the-Art and Challenges for Wireless and Mobile Systems	2022	*IEEE Communications Surveys and Tutorials*	24,1	123–159
Liu T.Y.A., Wu J.-H.	The Ethical and Societal Considerations for the Rise of Artificial Intelligence and Big Data in Ophthalmology	2022	*Frontiers in Medicine*	9	–
Liu V., Chilton L.B.	Design Guidelines for Prompt Engineering Text-to-Image Generative Models	2022	*Conference on Human Factors in Computing Systems – Proceedings*	–	1–23
Liu Z., Teng Z., Song Y., Ye X., Ye O.	Channel Modeling and Generation: Train Generative Networks and Generate 6G Channel Data	2022	*2022 IEEE 8th International Conference on Computer and Communications, ICCC 2022*	–	72–78
Lokhande S., Zhao Q., Tucker F., Xu H., Sullivan N., Chen G.	Hybrid Learning-based Online High-accuracy Pedestrian Dead Reckoning Navigation System with AI-on-a-Chip	2022	*Proceedings of SPIE – The International Society for Optical Engineering*	12121	–
Longoni C., Fradkin A., Cian L., Pennycook G.	News from Generative Artificial Intelligence Is Believed Less	2022	*ACM International Conference Proceeding Series*	–	97–106
Losev A.P., Tatarenkov D.A., Tumanova E.I.	Development of an Image Generation System based on a Depth Map	2022	*Proceedings of the 2022 Conference of Russian Young Researchers in Electrical and Electronic Engineering, ElConRus 2022*	–	53–56
Lou Y., Kumar A., Xiang J.	Machinery Fault Diagnosis Based on Domain Adaptation to Bridge the Gap Between Simulation and Measured Signals	2022	*IEEE Transactions on Instrumentation and Measurement*	71	1–9
Louie R., Engel J., Huang C.-Z.A.	Expressive Communication: Evaluating Developments in Generative Models and Steering Interfaces for Music Creation	2022	*International Conference on Intelligent User Interfaces, Proceedings IUI*	–	405–417
Low S.J., Raghavan V.S.G., Gopalan H., Wong J.C., Yeoh J., Ooi C.C.	FastFlow: AI for Fast Urban Wind Velocity Prediction	2022	*IEEE International Conference on Data Mining Workshops, ICDMW*	November	147–154
Lu D., Fei J., Liu L., Li Z.	A GAN-based Method for Generating SQL Injection Attack Samples	2022	*IEEE Joint International Information Technology and Artificial Intelligence Conference (ITAIC)*	June	1827–1833
Luleci F., Catbas F.N., Avci O.	A literature review: Generative adversarial networks for civil structural health monitoring	2022	*Frontiers in Built Environment*	8	1027379
Luleci F., Catbas F.N., Avci O.	Generative Adversarial Networks for Data Generation in Structural Health Monitoring	2022	*Frontiers in Built Environment*	8	816644
Luo L., Ogawa K., Peebles G., Ishiguro H.	Towards a Personality AI for Robots: Potential Colony Capacity of a Goal-Shaped Generative Personality Model When Used for Expressing Personalities via Non-Verbal Behaviour of Humanoid Robots	2022	*Frontiers in Robotics and AI*	9	728776
Lyu L., Li Y., Nandakumar K., Yu J., Ma X.	How to Democratise and Protect AI: Fair and Differentially Private Decentralised Deep Learning	2022	*IEEE Transactions on Dependable and Secure Computing*	19,2	1003–1017
Lyu Z., Ali S., Breazeal C.	Introducing Variational Autoencoders to High School Students	2022	*Proceedings of the 36th AAAI Conference on Artificial Intelligence, AAAI 2022*	36	12801–12809
Maan J.	Deep Learning-driven Explainable AI using Generative Adversarial Network (GAN)	2022	*INDICON 2022 – 2022 IEEE 19th India Council International Conference*		
Madan C., Diddee H., Kumar D., Gupta S., Jindal S., Lal M., Chiranjeev	NATIVE ACCENT SENSITIVE VOICE CLONING USING PAIRWISE RANKING BASED DECODER MODELS	2022	*Mechatronic Systems and Control*	50,3	122–129
Main A., Grierson M., Yamada-Rice D., Murr J.	Augmenting Personal Creativity with Artificial Intelligence Workshop proposal for Creativity and Cognition 2022	2022	*ACM International Conference Proceeding Series*	–	462–465
Manalastas M., Farooq M.U.B., Zaidi S.M.A., Abu-Dayya A., Imran A.	A Data-Driven Framework for Inter-Frequency Handover Failure Prediction and Mitigation	2022	*IEEE Transactions on Vehicular Technology*	71,6	6158–6172
Manasa S., Kumar K.P.	Digital Forensics Investigation for Attacks on Artificial Intelligence	2022	*ECS Transactions*	107,1	19639–19645

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Mandal S., Paul D., Saha S., Das P.	Deep learning assisted detection of toxic heavy metal ions based on visual fluorescence responses from a carbon nanoparticle array	2022	*Environmental Science: Nano*	9,7	2596–2606
Marandi A.K., Dogra R., Bhatt R., Gupta R., Reddy S., Barve A.	Generative Boltzmann Adversarial Network in Manet Attack Detection and QOS Enhancement with Latency	2022	*International Journal of Communication Networks and Information Security*	14,3	199–213
Marathe A., Jain P., Walambe R., Kotecha K.	RestoreX-AI: A Contrastive Approach towards Guiding Image Restoration via Explainable AI Systems	2022	*IEEE Computer Society Conference on Computer Vision and Pattern Recognition Workshops*	June	3029–3038
Martin C.P.	Performing with a Generative Electronic Music Controller	2022	*CEUR Workshop Proceedings*	3124	103–106
Matsubara K., Ibaraki M., Nemoto M., Watabe H., Kimura Y.	A review on AI in PET imaging	2022	*Annals of Nuclear Medicine*	36,2	133–143
Matsui T., Taki M., Pham T.Q., Chikazoe J., Jimura K.	Counterfactual Explanation of Brain Activity Classifiers Using Image-To-Image Transfer by Generative Adversarial Network	2022	*Frontiers in Neuroinformatics*	15	–
McClelland R.	Generative Design and Digital Manufacturing: Using AI and robots to build lightweight instruments	2022	*Proceedings of SPIE – The International Society for Optical Engineering*	1221	–
McIlroy-Young R., Kleinberg J., Sen S., Barocas S., Anderson A.	Mimetic models: Ethical implications of ai that acts like you	2022	*AIES 2022 – Proceedings of the 2022 AAAI/ACM Conference on AI, Ethics, and Society*	–	479–490
Mendia I., Gil-Lopez S., Grau I., Del Ser J.	A novel approach for the detection of anomalous energy consumption patterns in industrial cyber-physical systems	2022	*Expert Systems*	–	e12959
Mepani K., Domadiya N.	A Review on Transfer Learning and Generative Adversarial Networks for Classification of ALL	2022	*6th International Conference on Electronics, Communication and Aerospace Technology, ICECA 2022 – Proceedings*	–	1112–1116
Mertes S., Huber T., Weitz K., Heimerl A., André E.	GANterfactual—Counterfactual Explanations for Medical Non-experts Using Generative Adversarial Learning	2022	*Frontiers in Artificial Intelligence*	5	–
Meyer B.H., Pozo A.T.R., Nunan Zola W.M.	Global and local structure preserving GPU t-SNE methods for large-scale applications	2022	*Expert Systems with Applications*	201	–
Meyer D.W.	Find the Real: A Study of Individuals' Ability to Differentiate Between Authentic Human Faces and Artificial-Intelligence Generated Faces	2022	*Communications in Computer and Information Science*	1655 CCIS	655–662
Mi J., Wang L., Liu Y., Zhang J.	KDE-GAN: A multimodal medical image-fusion model based on knowledge distillation and explainable AI modules	2022	*Computers in Biology and Medicine*	151	–
Miao J., Li C., Du X., Chen B.	Rotate vector reducer design using resnet-based model and integration of discretized optimization	2022	*Journal of Mechanical Science and Technology*	36,4	1889–1902
Mikołajczyk A., Majchrowska S., Carrasco Limeros S.	The (de)biasing Effect of GAN-Based Augmentation Methods on Skin Lesion Images	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13438 LNCS	437–447
Min J., Liu Z., Wang L., Li D., Zhang M., Huang Y.	Music Generation System for Adversarial Training Based on Deep Learning	2022	*Processes*	10,12	–
Miranda L., Garibary O.O.	Approaching (super)human intent recognition in stag hunt with the Naïve Utility Calculus generative model	2022	*Computational and Mathematical Organization Theory*	29,3	434–447
Mirka M., France-Pillois M., Sassatelli G., Gamatie A.	A Generative AI for Heterogeneous Network-on-Chip Design Space Pruning	2022	*Proceedings of the 2022 Design, Automation and Test in Europe Conference and Exhibition, DATE 2022*	–	1135–1138
Mishra S., Khashabi D., Baral C., Hajishirzi H.	Cross-Task Generalization via Natural Language Crowdsourcing Instructions	2022	*Proceedings of the Annual Meeting of the Association for Computational Linguistics*	1	3470–3487
Mo S., Lu P., Liu X.	AI-Generated Face Image Identification with Different Color Space Channel Combinations	2022	*Sensors*	22,21	–
Moawad A.W., Fuentes D.T., Elbanan M.G., Shalaby A.S., Guccione J., Kamel S., Jensen C. T., Elsayes K.M.	Artificial Intelligence in Diagnostic Radiology: Where Do We Stand, Challenges, and Opportunities	2022	*Journal of Computer Assisted Tomography*	46,1	78–90
Mohana P.P.	A Survey of Modern Deep Learning based Generative Adversarial Networks (GANs)	2022	*Proceedings – 6th International Conference on Computing Methodologies and Communication, ICCMC 2022*	–	1146–1152
Moon I.Y., Yu J., Jeong H.W., Lee H.W., Kim S.-J., Oh Y.-S., Jung J., Oh S., Kang S.-H.	Predicting microstructural evolution based on deformation history of A230 alloy using a finite element method-assisted generative model	2022	*Materials Science and Engineering A*	854	143852
Mukaidaisi M., Vu A., Grantham K., Tchagang A., Li Y.	Multi-Objective Drug Design Based on Graph-Fragment Molecular Representation and Deep Evolutionary Learning	2022	*Frontiers in Pharmacology*	13	920747
Muller M., Chilton L.B., Kantosalo A., Maher M.L., Martin C.P., Walsh G.	GenAICHI: Generative AI and HCI	2022	*Conference on Human Factors in Computing Systems – Proceedings*	–	1–7

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Muller M., Ross S., Houde S., Agarwal M., Martinez F., Richards J., Talamadupula K., Weisz J.D.	Drinking Chai with Your (AI) Programming Partner: A Design Fiction about Generative AI for Software Engineering	2022	*CEUR Workshop Proceedings*	3124	107–122
Mumuni A., Mumuni F.	Robust appearance modeling for object detection and tracking: a survey of deep learning approaches	2022	*Progress in Artificial Intelligence*	11,4	279–313
Munawar H.S., Ullah F., Heravi A., Thaheem M.J., Maqsoom A.	Inspecting buildings using drones and computer vision: A machine learning approach to detect cracks and damages	2022	*Drones*	6,1	–
Na S., Do M., Yu K., Kim J.	Realistic Image Generation from Text by Using BERT-Based Embedding	2022	*Electronics (Switzerland)*	11,5	–
Nair A., Deshmukh J., Sonare A., Mishra T., Joseph R.	Image Outpainting using Wasserstein Generative Adversarial Network with Gradient Penalty	2022	*Proceedings – 6th International Conference on Computing Methodologies and Communication, ICCMC 2022*	–	1248–1255
Najee-Ullah A., Landeros L., Balytskyi Y., Chang S.-Y.	Towards Detection of AI-Generated Texts and Misinformation	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13176 LNCS	194–205
Nakane K., Kawai T., Sugie R., Takada H.	Simulation of ECG for Cardiac Diseases Using Generative Adversarial Networks	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13308 LNCS	446–458
Narteni S., Orani V., Ferrari E., Verda D., Cambiaso E., Mongelli M.	A New XAI-based Evaluation of Generative Adversarial Networks for IMU Data Augmentation	2022	*2022 IEEE International Conference on E–Health Networking, Application and Services, HealthCom 2022*	–	167–172
Natella R., Ceccarelli A., Ficco M.	Federated and Generative Data Sharing for Data-Driven Security: Challenges and Approach	2022	*Proceedings of the 2022 IEEE International Conference on Dependable, Autonomic and Secure Computing*	–	1–6
Naveed M.H., Hashmi U.S., Tajved N., Sultan N., Imran A.	Assessing Deep Generative Models on Time Series Network Data	2022	*IEEE Access*	10	64601–64617
Ng C.K.C.	Artificial Intelligence for Radiation Dose Optimization in Pediatric Radiology: A Systematic Review	2022	*Children*	9,7	–
Ng P., Odaibat B., Doria D., Fernandez A.	An Info-Biological Theory Approach to Computer-Aided Architectural Design: UnSSEUS	2022	*Communications in Computer and Information Science*	1465 CCIS	436–455
Nocentini O., Kim J., Borras J., Alenyà G., Cavallo F.	Identification of the highest wrinkle grasping point of a folded hospital gown	2022	*CEUR Workshop Proceedings*	3323	–
Novelli N., Proksch S.	Am I (Deep) Blue? Music-Making AI and Emotional Awareness	2022	*Frontiers in Neurorobotics*	16	–
Oh S., Lee S., Son M., Kim J., Ki H.	Accurate prediction of the particle image velocimetry flow field and rotor thrust using deep learning	2022	*Journal of Fluid Mechanics*	939	–
Okazaki K., Inoue K.	Explainable Model Fusion for Customer Journey Mapping	2022	*Frontiers in Artificial Intelligence*	5	–
Oppenlaender J.	The Creativity of Text-to-Image Generation	2022	*Proceedings of the 25th International Academic Mindtrek Conference*	–	192–202
O'reilly J.A., Asadi F.	Identifying Obviously Artificial Medical Images Produced by a Generative Adversarial Network	2022	*Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS*	July	430–433
Pacheco F., Hermosilla G., Piña O., Villavicencio G., Allende-Cid H., Palma J., Valenzuela P., García J., Carpanetti A., Minatogawa V., Suazo G., León A., López R., Novoa G.	Generation of Synthetic Data for the Analysis of the Physical Stability of Tailing Dams through Artificial Intelligence	2022	*Mathematics*	10,23	–
Pal A., Rajanala S., Phan R., Wong K.	Guess-It-Generator: Generating in a Lewis Signaling Framework through Logical Reasoning	2022	*MM 2022 – Proceedings of the 30th ACM International Conference on Multimedia*		6396–6405
Palazzesi F., Pozzan A.	Deep Learning Applied to Ligand-Based De Novo Drug Design	2022	*Methods in Molecular Biology*	2390	273–299
Pandimurugan V., Rajasoundaran S., Routray S., Prabu A.V., Alyami H., Alharbi A., Ahmad S.	Detecting and Extracting Brain Hemorrhages from CT Images Using Generative Convolutional Imaging Scheme	2022	*Computational Intelligence and Neuroscience*	2022	–
Pandiyan V., Cui D., Parrilli A., Deshpande P., Masinelli G., Shevchik S., Wasmer K.	Monitoring of Direct Energy Deposition Process Using Manifold Learning and Co-Axial Melt Pool Imaging	2022	*Manufacturing Letters*	33	776–785
Park J., Hwang Y., Kim H.G., Lee J. S., Kim J.-O., Lee T.H., Jeon S.R., Hong S.J., Ko B.M., Kim S.	Reduced detection rate of artificial intelligence in images obtained from untrained endoscope models and improvement using domain adaptation algorithm	2022	*Frontiers in Medicine*	9	–
Park J.C., Kim G.-W.	Real-time Twist Rebar Detection System exploiting GAN-based Data Augmentation technique	2022	*CEUR Workshop Proceedings*	3362	–
Park K., Lee J., Lee K.	AI Analysis of HOP Circuit Failure and Improvement	2022	*Digest of Technical Papers – SID International Symposium*	53,1	1455–1457

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Park M., Tran D.Q., Bak J., Park S.	Advanced wildfire detection using generative adversarial network-based augmented datasets and weakly supervised object localization	2022	*International Journal of Applied Earth Observation and Geoinformation*	114	–
Park S.-M., Kim Y.-G.	Visual language navigation: a survey and open challenges	2022	*Artificial Intelligence Review*	56,1	365–427
Pasquini L., Napolitano A., Pignatelli M., Tagliente E., Parrillo C., Nasta F., Romano A., Bozzao A., Di Napoli A.	Synthetic Post-Contrast Imaging through Artificial Intelligence: Clinical Applications of Virtual and Augmented Contrast Media	2022	*Pharmaceutics*	14,11	–
Pataranutaporn P., Leong J., Danry V., Lawson A.P., Maes P., Sra M.	AI-Generated Virtual Instructors Based on Liked or Admired People Can Improve Motivation and Foster Positive Emotions for Learning	2022	*Proceedings – Frontiers in Education Conference, FIE*	–	1–9
Patronov A., Papadopoulos K., Engkvist O.	Has Artificial Intelligence Impacted Drug Discovery?	2022	*Methods in Molecular Biology*	2390	153–176
Paul W., Burlina P.	Robustness and Adaptation to Hidden Factors of Variation	2022	*IEEE Computer Society Conference on Computer Vision and Pattern Recognition Workshops*	June	122–129
Paul W., Hadzic A., Joshi N., Alajaji F., Burlina P.	TARA: Training and Representation Alteration for AI Fairness and Domain Generalization	2022	*Neural Computation*	34,3	716–753
Pavan Kumar I., Mahaveerakannan R., Praveen Kumar K., Basu I., Anil Kumar T.C., Choche M.	A Design of Disease Diagnosis based Smart Healthcare Model using Deep Learning Technique	2022	*Proceedings of the International Conference on Electronics and Renewable Systems, ICEARS 2022*	–	1444–1449
Pedwell C.	Speculative machines and us: more-than-human intuition and the algorithmic condition	2022	*Cultural Studies*		–
Peeperkorn M.	Artificial Creative Societies: Adaption, Intention, and Evaluation	2022	*ACM International Conference Proceeding Series*	–	704–707
Peltomaki J., Spencer F., Porres I.	WOGAN at the SBST 2022 CPS Tool Competition	2022	*Proceedings – 15th Search–Based Software Testing Workshop, SBST 2022*	–	53–54
Perron Q., Mirguet O., Tajmouati H., Skiredj A., Rojas A., Gohier A., Ducrot P., Bourguignon M.-P., Sansilvestri-Morel P., Do Huu N., Gellibert F., Gaston-Mathé Y.	Deep generative models for ligand-based de novo design applied to multi-parametric optimization	2022	*Journal of Computational Chemistry*	43,10	692–703
Perrotta C., Selwyn N., Ewin C.	Artificial intelligence and the affective labour of understanding: The intimate moderation of a language model	2022	*New Media and Society*	–	–
Philippidis A.	AI-Driven Pharma Tech Firm Expands Its Discovery Platform into Biologics Exscientia intends to double the addressable target universe of its platform by combining generative AI design and virtual screening	2022	*Genetic Engineering and Biotechnology News*	43,1	10–11
Pichl J., Marek P., Konrád J., Lorenc P., Kobza O., Zajíček T., Šedivý J.	Flowstorm: Open-Source Platform with Hybrid Dialogue Architecture	2022			39–45
Polamuri S.R., Srinivas D.K., Krishna Mohan D.A.	Multi-Model Generative Adversarial Network Hybrid Prediction Algorithm (MMGAN-HPA) for stock market prices prediction	2022	*Journal of King Saud University – Computer and Information Sciences*	34,9	7433–7444
Polymenis I., Haroutunian M., Norman R., Trodden D.	Virtual Underwater Datasets for Autonomous Inspections	2022	*Journal of Marine Science and Engineering*	10,9	–
Polymenis I., Haroutunian M., Norman R., Trodden D.	ARTIFICIAL UNDERWATER DATASET: GENERATING CUSTOM IMAGES USING DEEP LEARNING MODELS	2022	*Proceedings of the International Conference on Offshore Mechanics and Arctic Engineering – OMAE*	5–B,	–
Priscila S.S., Sharma A., Vanithamani S., Ahmad F., Mahaveerakannan R., Alrubaie A.J., Jagota V., Singh B.K.	Risk-Based Access Control Mechanism for Internet of Vehicles Using Artificial Intelligence	2022	*Security and Communication Networks*	2022	–
Prvulovic D., Vogl R., Knees P.	ReStyle-MusicVAE: Enhancing User Control of Deep Generative Music Models with Expert Labeled Anchors	2022	*UMAP2022 – Adjunct Proceedings of the 30th ACM Conference on User Modeling, Adaptation and Personalization*	–	63–66
Qian M., Zhu E.	Extracting and Re-mapping Narrative Text Structure Elements Between Languages Using Self-supervised and Active Few-Shot Learning	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13336 LNAI	581–593
Qiao H., Liu V., Chilton L.	Initial Images: Using Image Prompts to Improve Subject Representation in Multimodal AI Generated Art	2022	*ACM International Conference Proceeding Series*	–	15–28
Quan S.J.	Urban-GAN: An artificial intelligence-aided computation system for plural urban design	2022	*Environment and Planning B: Urban Analytics and City Science*	49,9	2500–2515
Raghavendra Rao A., Samanta D.	A Real-Time Approach with Deep Learning for Pandemic Management	2022	*EAI/Springer Innovations in Communication and Computing*	–	113–139

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Raina A., Cagan J., McComb C.	SELF LEARNING DESIGN AGENT (SLDA): ENABLING DEEP LEARNING AND TREE SEARCH IN COMPLEX ACTION SPACES	2022	*Proceedings of the ASME Design Engineering Technical Conference*	3–B	–
Rajesh N., Prajwala M.S., Kumari N., Rayyan M., Ramachandra A. C.	Hybrid Model for Deepfake Detection	2022	*Lecture Notes in Electrical Engineering*	915	639–649
Raman T.A., Penman S., Kollar J.	SASAKI: Filling the design gap—Urban impressions with AI	2022	*Artificial Intelligence in Urban Planning and Design: Technologies, Implementation, and Impacts*		339–362
Ramdani A., Perbawa A., Puspita I., Vahrenkamp V.	Acoustic impedance to outcrop: Presenting near-surface seismic data as a virtual outcrop in carbonate analog studies	2022	*Leading Edge*	41,9	599–610
Ramezanian-Panahi M., Abrevaya G., Gagnon-Audet J.-C., Voleti V., Rish I., Dumas G.	Generative Models of Brain Dynamics	2022	*Frontiers in Artificial Intelligence*	5	–
Rampini L., Re Cecconi F.	ARTIFICIAL INTELLIGENCE IN CONSTRUCTION ASSET MANAGEMENT: A REVIEW OF PRESENT STATUS, CHALLENGES AND FUTURE OPPORTUNITIES	2022	*Journal of Information Technology in Construction*	27	884–913
Randhawa R.H., Aslam N., Alauthman M., Rafiq H.	Evasion Generative Adversarial Network for Low Data Regimes	2022	*IEEE Transactions on Artificial Intelligence*		1–13
Ranjan A., Behera V.N.J., Reza M.	Using a Bi-Directional Long Short-Term Memory Model with Attention Mechanism Trained on MIDI Data for Generating Unique Music	2022	*Studies in Computational Intelligence*	1006	219–239
Ravi D., Blumberg S.B., Ingala S., Barkhof F., Alexander D.C., Oxtoby N.P., for the Alzheimer's Disease Neuroimaging Initiative	Degenerative adversarial neuroimage nets for brain scan simulations: Application in ageing and dementia	2022	*Medical Image Analysis*	75	–
Ravin N., Saha S., Schweitzer A., Elahi A., Dako F., Mollura D., Chapman D.	Mitigating Domain Shift in AI-Based TB Screening With Unsupervised Domain Adaptation	2022	*IEEE Access*	10	45997–46013
Reale M.J., Nichols P., Schneider E., Bishop M., Cornacchia M.	Generative Adversarial Networks for Vehicle Transformation in Overhead and Satellite Imagery	2022	*Proceedings – Applied Imagery Pattern Recognition Workshop*	–	1–13
Reddy A.	Artificial everyday creativity: creative leaps with AI through critical making	2022	*Digital Creativity*	33,4	295–313
Remya Revi K., Isaac M.M., Antony R., Wilscy M.	GAN-generated Fake Face Image Detection using Opponent Color Local Binary Pattern and Deep Learning Technique	2022	*Proceedings of the 2022 International Conference on Connected Systems and Intelligence, CSI 2022*	–	1–7
Riccio P., Galati F., Zuluaga M.A., De Martin J.C., Nichele S.	Translating Emotions from EEG to Visual Arts	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13221 LNCS	243–258
Rishi R., Abhishek S., Anudeep N., Vivek V.	A Survey on Advanced Text Recognition and Projection in Augmented Reality	2022	*Proceedings – 2022 4th International Conference on Advances in Computing, Communication Control and Networking, ICAC3N 2022*	–	1085–1089
Rohan A.	Holistic Fault Detection and Diagnosis System in Imbalanced, Scarce, Multi-Domain (ISMD) Data Setting for Component-Level Prognostics and Health Management (PHM)	2022	*Mathematics*	10,12	–
Rold F.D., Witkovski O., Aubert-Kato N.	Synaptic pruning with MAP-elites	2022	*GECCO 2022 Companion – Proceedings of the 2022 Genetic and Evolutionary Computation Conference*	–	639–642
Safron A., Çatal O., Verbelen T.	Generalized Simultaneous Localization and Mapping (G-SLAM) as unification framework for natural and artificial intelligences: towards reverse engineering the hippocampal/entorhinal system and principles of high-level cognition	2022	*Frontiers in Systems Neuroscience*	16	–
Saif S., Tehseen S., Ali S.S., Kausar S., Jameel A.	Generalized Deepfake Video Detection Through Time-Distribution and Metric Learning	2022	*IT Professional*	24,2	38–44
Salekin M.S., Zamzmi G., Goldgof D., Mouton P.R., Anand K.J.S., Ashmeade T., Prescott S., Huang Y., Sun Y.	Attentional Generative Multimodal Network for Neonatal Postoperative Pain Estimation	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13433 LNCS	749–759
Salh A., Audah L., Alhartomi M.A., Kim K.S., Alsamhi S.H., Almalki F.A., Abdullah Q., Saif A., Algethami H.	Smart Packet Transmission Scheduling in Cognitive IoT Systems: DDQN Based Approach	2022	*IEEE Access*	10	50023–50036
Saravanan J., Kumar T.A., Nwanakwaugwu A.C., Ajagbe S. A., Opadotun A.T., Afolayan D. D., Olawoyin O.O.	Detection of COVID-19 Using Denoising Autoencoders and Gabor Filters	2022	*Communications in Computer and Information Science*	1643 CCIS	252–266

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Särmäkari N., Vänskä A.	'Just hit a button!'–fashion 4.0 designers as cyborgs, experimenting and designing with generative algorithms	2022	*International Journal of Fashion Design, Technology and Education*	15,2	211–220
Sauer S., Matter H., Hessler G., Grebner C.	Optimizing interactions to protein binding sites by integrating docking-scoring strategies into generative AI methods	2022	*Frontiers in Chemistry*	10	–
Saunders R., Gemeinboeck P.	Creative AI, Embodiment, and Performance	2022	*Springer Series on Cultural Computing*	–	191–206
Savery R., Savery A., Baird J.	Robotic Arm Generative Painting Through Real-time Analysis of Music Performance	2022	*HAI 2022 – Proceedings of the 10th Conference on Human–Agent Interaction*	–	253–255
Sawangjai P., Trakulruangroj M., Boonnag C., Piriyajitakonkij M., Tripathy R.K., Sudhawiyangkul T., Wilaiprasitporn T.	EEGANet: Removal of Ocular Artifacts from the EEG Signal Using Generative Adversarial Networks	2022	*IEEE Journal of Biomedical and Health Informatics*	26,10	4913–4924
Schmälzle R., Wilcox S.	Harnessing Artificial Intelligence for Health Message Generation: The Folic Acid Message Engine	2022	*Journal of Medical Internet Research*	24,1	–
Searle R., Gururaj P., Gupta A., Kannur K.	Secure Implementation of Artificial Intelligence Applications for Anti-Money Laundering using Confidential Computing	2022	*Proceedings – 2022 IEEE International Conference on Big Data, Big Data 2022*	–	3092–3098
Seneviratne O.	Blockchain for Social Good: Combating Misinformation on the Web with AI and Blockchain	2022	*ACM International Conference Proceeding Series*	–	435–442
Senhora F.V., Chi H., Zhang Y., Mirabella L., Tang T.L.E., Paulino G.H.	Machine learning for topology optimization: Physics-based learning through an independent training strategy	2022	*Computer Methods in Applied Mechanics and Engineering*	398	–
Shang L., Kou Z., Zhang Y., Wang D.	A Duo-generative Approach to Explainable Multimodal COVID-19 Misinformation Detection	2022	*WWW 2022 – Proceedings of the ACM Web Conference 2022*	–	3623–3631
Sharma P., Mohanram B., Vijayashree J., Jayashree J., Sahoo A.R.	Image Enhancement using ESRGAN for CNN based X-Ray Classification	2022	*Proceedings of 5th International Conference on Contemporary Computing and Informatics, IC3I 2022*	–	1965–1969
Sharples M.	Automated Essay Writing: An AIED Opinion	2022	*International Journal of Artificial Intelligence in Education*	32,4	1119–1126
Shen Y., Sowmya A., Luo Y., Liang X., Shen D., Ke J.	A Federated Learning System for Histopathology Image Analysis with an Orchestral Stain-Normalization GAN	2022	*IEEE Transactions on Medical Imaging*	–	1–1
Shen Z., Ding F., Jolfaei A., Yadav K., Vashisht S., Yu K.	DeformableGAN: Generating Medical Images With Improved Integrity for Healthcare Cyber Physical Systems	2022	*IEEE Transactions on Network Science and Engineering*	–	1–13
Shi L.	Application Model Construction of Traditional Cultural Elements in Illustration Design under Artificial Intelligence Background	2022	*Mobile Information Systems*	2022	–
Shi X., Yang J., He L.	Commonsense Generative Model for Chinese Automatic Knowledge Graph Construction	2022	*2022 IEEE 2nd International Conference on Electronic Technology, Communication and Information, ICETCI 2022*	–	20–24
Shliselberg M., Dori-Hacohen S.	RIET Lab at CheckThat! 2022: Improving Decoder based Re-ranking for Claim Matching	2022	*CEUR Workshop Proceedings*	3180	671–678
Shoeibi A., Ghassemi N., Heras J., Rezaei M., Gorriz J.M.	Automatic Diagnosis of Myocarditis in Cardiac Magnetic Images Using CycleGAN and Deep PreTrained Models	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13258 LNCS	145–155
Shroff J., Walambe R., Singh S.K., Kotecha K.	Enhanced Security Against Volumetric DDoS Attacks Using Adversarial Machine Learning	2022	*Wireless Communications and Mobile Computing*	2022	–
Singh P.N., Behera S.	The Transformers' Ability to Implement for Solving Intricacies of Language Processing	2022	*2022 2nd Asian Conference on Innovation in Technology, ASIANCON 2022*	–	1–7
Skryagin A., Stammer W., Ochs D., Dhami D.S., Kersting K.	Neural-Probabilistic Answer Set Programming	2022	*19th International Conference on Principles of Knowledge Representation and Reasoning, KR 2022*	–	463–473
Soundararajan R., Praveen D., Pg Shastry P., Pradeep C.	A Novel Approach for Generative Design and Performance Analysis of an Additively Manufactured Formula Vehicle Knuckle	2022	*SAE Technical Papers*	–	–
Stojanovski T., Zhang H., Frid E., Chhatre K., Peters C., Samuels I., Sanders P., Partanen J., Lefosse D.	Rethinking Computer-Aided Architectural Design (CAAD) – From Generative Algorithms and Architectural Intelligence to Environmental Design and Ambient Intelligence	2022	*Communications in Computer and Information Science*	1465 CCIS	62–83
Stumpo V., Kernbach J.M., van Niftrik C.H.B., Sebök M., Fierstra J., Regli L., Serra C., Staartjes V. E.	Machine Learning Algorithms in Neuroimaging: An Overview	2022	*Acta Neurochirurgica, Supplementum*	134	125–138
Suh S., An P.	Leveraging Generative Conversational AI to Develop a Creative Learning Environment for Computational Thinking	2022	*International Conference on Intelligent User Interfaces, Proceedings IUI*	–	73–76

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Sun H., Pears N., Gu Y.	Information Bottlenecked Variational Autoencoder for Disentangled 3D Facial Expression Modelling	2022	*Proceedings – 2022 IEEE/CVF Winter Conference on Applications of Computer Vision, WACV 2022*	–	2334–2343
Sun J., Liao Q.V., Muller M., Agarwal M., Houde S., Talamadupula K., Weisz J.D.	Investigating Explainability of Generative AI for Code through Scenario-based Design	2022	*International Conference on Intelligent User Interfaces, Proceedings IUI*	–	212–228
Sun J., Wang Z., Li J., Lu C.	Unified and Fast Human Trajectory Prediction Via Conditionally Parameterized Normalizing Flow	2022	*IEEE Robotics and Automation Letters*	7,2	842–849
Sutrave K., Zeng D., Godasu R.	GANs and TL: Is the Combination Better than the Sum of its Parts? ~ Promises and Challenges of Deep Learning Applications in Medical Image Analysis for Long-term Impact	2022	*IMCIC 2022 – 13th International Multi–Conference on Complexity, Informatics and Cybernetics, Proceedings*	2	153–158
Tabrez A., Luebbers M.B., Hayes B.	Descriptive and Prescriptive Visual Guidance to Improve Shared Situational Awareness in Human-Robot Teaming	2022	*Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems, AAMAS*	2	1256–1264
Takeshima H.	Deep Learning and Its Application to Function Approximation for MR in Medicine: An Overview	2022	*Magnetic Resonance in Medical Sciences*	21,4	553–568
Tan J., Li L., Zhang H., Liu B.	Bayesian Network for Base Station Energy Consumption Data Completion	2022			19–23
Tang H., Liu J., Xu G.	A Proposal for Image-Compression Algorithm for Display Test Images1	2022	*Digest of Technical Papers – SID International Symposium*	53,1	967–970
Tang M.	Human and Machine Symbiosis-An Experiment of Human and Robot Co-creation of Calligraphy-Style Drawing	2022	*Communications in Computer and Information Science*	1580 CCIS	462–467
Tani T.A., Shibly M.M.A., Ripon S.	A Deep Convolutional Generative Adversarial Network-Based Model to Analyze Histopathological Breast Cancer Images	2022	*Lecture Notes on Data Engineering and Communications Technologies*	132	761–773
Taniguchi A., Fukawa A., Yamakawa H.	Hippocampal formation-inspired probabilistic generative model	2022	*Neural Networks*	151	317–335
Taniguchi T., Yamakawa H., Nagai T., Doya K., Sakagami M., Suzuki M., Nakamura T., Taniguchi A.	A whole brain probabilistic generative model: Toward realizing cognitive architectures for developmental robots	2022	*Neural Networks*	150	293–312
Tanjim M.M., Sinha R., Singh K.K., Mahadevan S., Arbour D., Sinha M., Cottrell G.W.	Generating and Controlling Diversity in Image Search	2022	*Proceedings – 2022 IEEE/CVF Winter Conference on Applications of Computer Vision, WACV 2022*		3908–3916
Tejwani R., Katz B., Breazeal C.	Migratable AI: Personalizing Dialog Conversations with Migration Context	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13817 LNAI	89–99
Thakoor K.A., Carter A., Song G., Wax A., Moussa O., Chen R.W.S., Hendon C., Sajda P.	Enhancing Portable OCT Image Quality via GANs for AI-Based Eye Disease Detection	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13573 LNCS	155–167
Thomas C.K., Saad W.	Neuro-Symbolic Artificial Intelligence (AI) for Intent based Semantic Communication	2022	*2022 IEEE Global Communications Conference, GLOBECOM 2022 – Proceedings*		2698–2703
Thomas M., Boardman A., Garcia-Ortegon M., Yang H., de Graaf C., Bender A.	Applications of Artificial Intelligence in Drug Design: Opportunities and Challenges	2022	*Methods in Molecular Biology*	2390	1–59
Thomas M., O'Boyle N.M., Bender A., de Graaf C.	Augmented Hill-Climb increases reinforcement learning efficiency for language-based de novo molecule generation	2022	*Journal of Cheminformatics*	14,1	–
Tian M., Lu J., Gao H., Wang H., Yu J., Shi C.	A Lightweight Spiking GAN Model for Memristor-centric Silicon Circuit with On-chip Reinforcement Adversarial Learning	2022	*Proceedings – IEEE International Symposium on Circuits and Systems*	May	3388–3392
Toda R., Teramoto A., Kondo M., Imaizumi K., Saito K., Fujita H.	Lung cancer CT image generation from a free-form sketch using style-based pix2pix for data augmentation	2022	*Scientific Reports*	12,1	–
Tölle M., Köthe U., André F., Meder B., Engelhardt S.	Content-Aware Differential Privacy with Conditional Invertible Neural Networks	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13573 LNCS	89–99
Tran D.	Images of Former Futures and Reformations	2022	*Architectural Design*	92,2	84–89
Treppner M., Binder H., Hess M.	Interpretable generative deep learning: an illustration with single cell gene expression data	2022	*Human Genetics*	141,9	1481–1498
Tretyakova I.N., Park M.E., Oreshkova N.V., Padutov V.E.	The Regenerative Capacity of Siberian Larch Cell Lines In Vitro	2022	*Biology Bulletin*	49,6	609–619
Tudosiu P.-D., Pinaya W.H.L., Graham M.S., Borges P., Fernandez V., Yang D., Appleyard J., Novati G., Mehra D., Vella M., Nachev P., Ourselin S., Cardoso J.	Morphology-Preserving Autoregressive 3D Generative Modelling of the Brain	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13570 LNCS	66–78

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Tuli S., Casale G., Jennings N.R.	DRAGON: Decentralized Fault Tolerance in Edge Federations	2022	*IEEE Transactions on Network and Service Management*		1–1
Tuli S., Casale G., Jennings N.R.	PreGAN: Preemptive Migration Prediction Network for Proactive Fault-Tolerant Edge Computing	2022	*Proceedings – IEEE INFOCOM*	May	670–679
Twomey R.	Three Stage Drawing Transfer: Collaborative Drawing Between a Generative Adversarial Network, Co-robotic Arm, and Five-Year-Old Child	2022	*Proceedings of the ACM on Computer Graphics and Interactive Techniques*	5,4	–
Upadhyay A., Dubey A., Arora V., Kuriakose S.M., Agarawal S.	FLNet: Graph Constrained Floor Layout Generation	2022	*ICMEW 2022 – IEEE International Conference on Multimedia and Expo Workshops 2022, Proceedings*	–	1–6
Uthus D., Voitovich M., Mical R.J.	Augmenting Poetry Composition with Verse by Verse	2022	*NAACL 2022 – 2022 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, Industry Papers*	–	18–26
Vaidyanathan K., Danet T.	Detecting Trojans in Satellite Imagery AI applications	2022	*Proceedings of SPIE – The International Society for Optical Engineering*	12113	–
Valiuddin M.M.A., Viviers C.G.A., van Sloun R.J.G., de With P.H. N., der Sommen F.	Efficient Out-of-Distribution Detection of Melanoma with Wavelet-Based Normalizing Flows	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13581 LNCS	99–107
Van Der Boon M., Fermoselle L., Ter Haar F., Dijkstra-Soudarissanane S., Niamut O.	Deep Learning Augmented Realistic Avatars for Social VR Human Representation	2022	*IMX 2022 – Proceedings of the 2022 ACM International Conference on Interactive Media Experiences*	–	311–317
Varano E., Vougioukas K., Ma P., Petridis S., Pantic M., Reichenbach T.	Speech-Driven Facial Animations Improve Speech-in-Noise Comprehension of Humans	2022	*Frontiers in Neuroscience*	15	–
Vartinen S., Hamalainen P., Guckelsberger C.	Generating Role-Playing Game Quests With GPT Language Models	2022	*IEEE Transactions on Games*	–	1–12
Vasanthakumar C., Karthikeyan S., Raghunandhan V.R., Sanjay S., Tushar R.	A Study on Deep Fakes Detection Using Blinks and Tracker	2022	*2nd IEEE International Conference on Advanced Technologies in Intelligent Control, Environment, Computing and Communication Engineering, ICATIECE 2022*	–	1–5
Vedamurthy H.K., Ravi V., Gururaj S.P.	A reliable solution to detect deepfakes using Deep Learning	2022	*2022 4th International Conference on Cognitive Computing and Information Processing, CCIP 2022*	–	1–4
Venugopal R., Shafqat N., Venugopal I., Tillbury B.M.J., Stafford H.D., Bourazeri A.	Privacy preserving Generative Adversarial Networks to model Electronic Health Records	2022	*Neural Networks*	153	339–348
Viidalepp A.	The semiotic functioning of synthetic media	2022	*Informacios Tarsadalom*	22,4	109–118
Vo H.V., Nguyen D.H., Nguyen T. T., Nguyen H.N., Nguyen D.V.	Leveraging AI-Driven Realtime Intrusion Detection by Using WGAN and XGBoost	2022	*ACM International Conference Proceeding Series*		208–215
Vogt M.	Using deep neural networks to explore chemical space	2022	*Expert Opinion on Drug Discovery*	17,3	297–304
Waller R.R., Waller R.L.	Assembled Bias: Beyond Transparent Algorithmic Bias	2022	*Minds and Machines*	32,3	533–562
Wan Y., Qu Y., Gao L., Xiang Y.	Privacy-preserving blockchain-enabled federated learning for B5G-Driven edge computing	2022	*Computer Networks*	204	–
Wang A., Gao Z., Lee L.H., Braud T., Hui P.	Decentralized, not Dehumanized in the Metaverse: Bringing Utility to NFTs through Multimodal Interaction	2022	*ACM International Conference Proceeding Series*	–	662–667
Wang C., Han J.	DL4SciVis: A State-of-the-Art Survey on Deep Learning for Scientific Visualization	2022	*IEEE Transactions on Visualization and Computer Graphics*	–	–
Wang C., Zhou X., Liu P., Lu G., Wang H., Oeser M.	Study on pre-compaction of pavement graded gravels via imaging technologies, artificial intelligent and numerical simulations	2022	*Construction and Building Materials*	345	–
Wang H., Jia S., Li Z., Duan Y., Tao G., Zhao Z.	A Comprehensive Review of Artificial Intelligence in Prevention and Treatment of COVID-19 Pandemic	2022	*Frontiers in Genetics*	13,	–
Wang H., Xian M., Vakanski A.	TA-Net: Topology-Aware Network for Gland Segmentation	2022	*Proceedings – 2022 IEEE/CVF Winter Conference on Applications of Computer Vision, WACV 2022*	–	3241–3249
Wang L.	Construction of 3D Reconstruction System for Building Construction Scenes Based on Deep Learning and IoT	2022	*Wireless Communications and Mobile Computing*	2022	–
Wang Q., Kurz D.	Reconstructing Training Data from Diverse ML Models by Ensemble Inversion	2022	*Proceedings – 2022 IEEE/CVF Winter Conference on Applications of Computer Vision, WACV 2022*	–	3870–3878
Wang Z., Du X., Wu L.	AI-Based Secure Construction of University Information Services Platform	2022	*Security and Communication Networks*	2022	–
Watanabe S., Ueno T., Kimura Y., Mishina M., Sugimoto N.	Generative image transformer (GIT): unsupervised continuous image generative and transformable model for [123I]FP-CIT SPECT images 10.1007/s12149-021-01661-0)	2021	*Annals of Nuclear Medicine*	35,4	1203–1213
Weisz J.D., Maher M.L., Strobelt H., Chilton L.B., Bau D., Geyer W.	HAI-GEN 2022: 3rd Workshop on Human-AI Co-Creation with Generative Models	2022	*International Conference on Intelligent User Interfaces, Proceedings IUI*	–	4–6

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Weisz J.D., Muller M., Ross S.I., Martinez F., Houde S., Agarwal M., Talamadupula K., Richards J.T.	Better Together? An Evaluation of AI-Supported Code Translation	2022	*International Conference on Intelligent User Interfaces, Proceedings IUI*	–	369–391
Wen Z., Yu K., Qi X., Sato T., Myint S.H., Tamesue K., Katsuyama Y., Dobashi H., Murakami Y., Koyama I., Tokuda K., Kameyama W., Sato T.	AI-Based W-Band Suspicious Object Detection System for Moving Persons: Two-Stage Walkthrough Configuration and Recognition Optimization	2022	*Wireless Communications and Mobile Computing*	2022	–
Wertheim O., Suissa D.R., Brafman R.I.	Towards Plug'n Play Task-Level Autonomy for Robotics Using POMDPs and Generative Models	2022	*Electronic Proceedings in Theoretical Computer Science, EPTCS*	362	98–111
Witt A., Kim E.	Neural Image Classifiers for Historical Building Elements and Typologies	2022	*Technology Architecture and Design*	6,1	80–89
Wolfert R., van Nederveen S., Binnekamp R.	"FIT FOR PURPOSE BUILDING INFORMATION MODELLING AND SYSTEMS INTEGRATION (BIMSI) FOR BETTER CONSTRUCTION PROJECTS MANAGEMENT"	2022	*Journal of Modern Project Management*	10,1	175–187
Wu A.N., Stouffs R., Biljecki F.	Generative Adversarial Networks in the built environment: A comprehensive review of the application of GANs across data types and scales	2022	*Building and Environment*	223	–
Wu B., Li L., Cui Y., Zheng K.	Cross-Adversarial Learning for Molecular Generation in Drug Design	2022	*Frontiers in Pharmacology*	12	–
Wu C., Zhang H., Chen J., Gao Z., Zhang P., Muhammad K., Del Ser J.	Vessel-GAN: Angiographic reconstructions from myocardial CT perfusion with explainable generative adversarial networks	2022	*Future Generation Computer Systems*	130	128–139
Xiao J., Liu T., Zhang H., Szczerbicki E.	Adding Interpretability to Neural Knowledge DNA	2022	*Cybernetics and Systems*	53,5	500–509
Xiao Z.	Generative Adversarial Network and Its Application in Energy Internet	2022	*Mathematical Problems in Engineering*	2022	–
Xie M., Kulshrestha M., Wang S., Yang J., Chakrabarti A., Zhang N., Vorobeychik Y.	PROVES: Establishing Image Provenance using Semantic Signatures	2022	*Proceedings – 2022 IEEE/CVF Winter Conference on Applications of Computer Vision, WACV 2022*	–	3017–3026
Xing X., Huang J., Nan Y., Wu Y., Wang C., Gao Z., Walsh S., Yang G.	CS2 : A Controllable and Simultaneous Synthesizer of Images and Annotations with Minimal Human Intervention	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13438 LNCS	3–12
Xu H., Cai Z., Takabi D., Li W.	Audio-Visual Autoencoding for Privacy-Preserving Video Streaming	2022	*IEEE Internet of Things Journal*	9,3	1749–1761
Xu S., Liu C., Zhang B., Lü J., Guo G., Doermann D.	BiRe-ID: Binary Neural Network for Efficient Person Re-ID	2022	*ACM Transactions on Multimedia Computing, Communications and Applications*	18,1s	–
Xu T., Wei Z.	Waveform Defence Against Deep Learning Generative Adversarial Network Attacks	2022	*2022 13th International Symposium on Communication Systems, Networks and Digital Signal Processing, CSNDSP 2022*		503–508
Xu Y., Liu X., Pan L., Mao X., Liang H., Wang G., Chen T.	Explainable Dynamic Multimodal Variational Autoencoder for the Prediction of Patients with Suspected Central Precocious Puberty	2022	*IEEE Journal of Biomedical and Health Informatics*	26,3	1362–1373
Xue S., Guo R., Bohn K.P., Matzke J., Viscione M., Alberts I., Meng H., Sun C., Zhang M., Zhang M., Sznitman R., El Fakhri G., Rominger A., Li B., Shi K.	A cross-scanner and cross-tracer deep learning method for the recovery of standard-dose imaging quality from low-dose PET	2022	*European Journal of Nuclear Medicine and Molecular Imaging*	49,6	1843–1856
Yan H., Zhang H., Liu L., Zhou D., Xu X., Zhang Z., Yan S.	Toward Intelligent Design: An AI-based Fashion Designer Using Generative Adversarial Networks Aided by Sketch and Rendering Generators	2022	*IEEE Transactions on Multimedia*	–	–
Yan K., Su J., Huang J., Mo Y.	Chiller Fault Diagnosis Based on VAE-Enabled Generative Adversarial Networks	2022	*IEEE Transactions on Automation Science and Engineering*	19,1	387–395
Yang L., Li Y., Yang S.X., Lu Y., Guo T., Yu K.	Generative Adversarial Learning for Intelligent Trust Management in 6G Wireless Networks	2022	*IEEE Network*	36,4	134–140
Yang Y., Gao R., Xu Q.	Out-of-Distribution Detection with Semantic Mismatch Under Masking	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13684 LNCS	373–390
Yee-King M.	Latent Spaces: A Creative Approach	2022	*Springer Series on Cultural Computing*	–	137–154
Yesugade T., Kokate S., Patil S., Varma R., Pawar S.	Deepfake detection using LSTM-based neural network	2022	*Object Detection by Stereo Vision Images*	–	111–120
Yin G., Wang Y., Zhang Y., Huang S.	Adversarial Bidirectional Feature Generation for Generalized Zero-Shot Learning Under Unreliable Semantics	2022	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13535 LNCS	639–654
Young H., Dumoulin V., Castro P. S., Engel J., Huang C.-Z.A.	Compositional Steering of Music Transformers	2022	*CEUR Workshop Proceedings*	3124,	66–80

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Yu J., Cristea A.I., Harit A., Sun Z., Aduragba O.T., Shi L., Moubayed N.A.	INTERACTION: A Generative XAI Framework for Natural Language Inference Explanations	2022	*Proceedings of the International Joint Conference on Neural Networks*	July	–
Yuan A., Coenen A., Reif E., Ippolito D.	Wordcraft: Story Writing With Large Language Models	2022	*International Conference on Intelligent User Interfaces, Proceedings IUI*		841–852
Zaini M., Perkins J., Cheng H., Gholipour B.	Bridging the gap between electron and optical microscopy through neural network-enabled training and imaging	2022	*Proceedings of SPIE – The International Society for Optical Engineering*	12239	–
Zeng X., Wang F., Luo Y., Kang S.-G., Tang J., Lightstone F.C., Fang E.F., Cornell W., Nussinov R., Cheng F.	Deep generative molecular design reshapes drug discovery	2022	*Cell Reports Medicine*	3,12	–
Zeng Y., Xue D.	An Overview of Generative Adversarial Networks	2022	*2022 IEEE 2nd International Conference on Electronic Technology, Communication and Information, ICETCI 2022*		550–552
Zhang X., Gong C., Hu Y., Xu H., Deng J.	Generative Adversarial Network-Supported Permanent Magnet Temperature Estimation by Using Random Forest	2022	*Lecture Notes in Electrical Engineering*	916	459–472
Zhao L., Xiong Q., Yang Y., Li P., Yu B., Sun F., Sun C., Xue P.	Enabling Accurate Positioning in NLOS Scenarios by Hybrid Machine Learning with Denoising and Inpainting	2022	*IEEE Vehicular Technology Conference*	–	1–5
Zhao T., Song T.	Establishing a Fusion Model of Attention Mechanism and Generative Adversarial Network to Estimate Students' Attitudes in English Classes	2022	*Tehnicki Vjesnik*	29,5	1464–1471
Zheng Q., Hou Y., Yang H., Tan P., Shi H., Xu Z., Ye Z., Chen N., Qu X., Han X., Zou Y., Cui X., Yao H., Chen Y., Yao W., Zhang J., Chen Y., Liang J., Gu X., Wang D., Wei Y., Xue J., Jing B., Zeng Z., Wang L., Li Z., Wang Z.L.	Towards a sustainable monitoring: A self-powered smart transportation infrastructure skin	2022	*Nano Energy*	98	–
Zhou D., Zhang H., Yang K., Liu L., Yan H., Xu X., Zhang Z., Yan S.	Learning to Synthesize Compatible Fashion Items Using Semantic Alignment and Collocation Classification: An Outfit Generation Framework	2022	*IEEE Transactions on Neural Networks and Learning Systems*	–	1–15
Zhu Q., Zhang X., Luo J.	GENERATIVE PRE-TRAINED TRANSFORMERS FOR BIOLOGICALLY INSPIRED DESIGN	2022	*Proceedings of the ASME Design Engineering Technical Conference*	6	–
Zhu X., Fan J., Chawla A., Zheng D.	Artificial Intelligence in Radiation Therapy Treatment Planning	2022	*Artificial Intelligence in Radiation Oncology*		201–226
Zihao X., Hongyuan W., Pengyu Q., Weidong D., Ji Z., Fuhua C.	Printed Surface Defect Detection Model Based on Positive Samples	2022	*Computers, Materials and Continua*	72,3	5925–5938
Abangan A.S., Kopp D., Faillettaz R.	Artificial intelligence for fish behavior recognition may unlock fishing gear selectivity	2023	*Frontiers in Marine Science*	10	–
Adkins S., Sarmento P., Barthet M.	LooperGP: A Loopable Sequence Model for Live Coding Performance Using GuitarPro Tablature	2023	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13988 LNCS	3–19
Ahn S.Y., Timilsina S., Shin H.G., Lee J.H., Kim S.-H., Sohn K.-S., Kwon Y.N., Lee K.H., Kim J.S.	In situ health monitoring of multiscale structures and its instantaneous verification using mechanoluminescence and dual machine learning	2023	*iScience*	26,1	–
Akhtar Z.	Deepfakes Generation and Detection: A Short Survey	2023	*Journal of Imaging*	9,1	–
Aldausari N., Sowmya A., Marcus N., Mohammadi G.	Video Generative Adversarial Networks: A Review	2023	*ACM Computing Surveys*	55,2	–
Ali M., Naeem F., Tariq M., Kaddoum G.	Federated Learning for Privacy Preservation in Smart Healthcare Systems: A Comprehensive Survey	2023	*IEEE Journal of Biomedical and Health Informatics*	27,2	778–789
Amann J., Vayena E., Ormond K. E., Frey D., Madai V.I., Blasimme A.	Expectations and attitudes towards medical artificial intelligence: A qualitative study in the field of stroke	2023	*PLoS ONE*	18,44927	–
Andres J., Ocampo R., Bown O., Hill C., Pegram C., Schmidt A., Shave J., Wright B.	The Human-Built Environment-Natural Environment Relation-An Immersive Multisensory Exploration with 'System of a Sound'	2023	*International Conference on Intelligent User Interfaces, Proceedings IUI*	–	8–11
Annadurai C., Nelson I., Devi K.N., Manikandan R., Gandomi A.H.	Image Watermarking Based Data Hiding by Discrete Wavelet Transform Quantization Model with Convolutional Generative Adversarial Architectures	2023	*Applied Sciences (Switzerland)*	13,2	–
Arnold N.I., Angelov P., Atkinson P.M.	An Improved Explainable Point Cloud Classifier (XPCC)	2023	*IEEE Transactions on Artificial Intelligence*	4,1	71–80
Asgarian S., Ghasemi R., Momtazi S.	Generative adversarial network for sentiment-based stock prediction	2023	*Concurrency and Computation: Practice and Experience*	35,2	–

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Ashok K., Boddu R., Syed S.A., Sonawane V.R., Dabhade R.G., Reddy P.C.S.	GAN Base feedback analysis system for industrial IOT networks	2023	*Automatika*	64,2	259–267
Au Yeung J., Kraljevic Z., Luintel A., Balston A., Idowu E., Dobson R.J., Teo J.T.	AI chatbots not yet ready for clinical use	2023	*Frontiers in Digital Health*	5	–
Azuaje G., Liew K., Buening R., She W.J., Siriaraya P., Wakamiya S., Aramaki E.	Exploring the use of AI text-to-image generation to downregulate negative emotions in an expressive writing application	2023	*Royal Society Open Science*	10,1	–
Balogun I., Attoh-Okine N.	Covariate-Shift Generative Adversarial Network and Railway Track Image Analysis	2023	*Journal of Transportation Engineering Part A: Systems*	149,3	–
Bhandari M., Neupane A., Mallik S., Gaur L., Qin H.	Auguring Fake Face Images Using Dual Input Convolution Neural Network	2023	*Journal of Imaging*	9,1	–
Bode M.	AI Super-Resolution: Application to Turbulence and Combustion	2023	*Lecture Notes in Energy*	44	279–305
Bouman P.M., Noteboom S., Nobrega Santos F.A., Beck E.S., Bliault G., Castellaro M., Calabrese M., Chard D.T., Eichinger P., Filippi M., Inglese M., Lapucci C., Marciniak A., Moraal B., Pinzon A.M., Mühlau M., Preziosa P., Reich D.S., Rocca M.A., Schoonheim M.M., Twisk J.W.R., Wiestler B., Jonkman L.E., Guttmann C.R.G., Geurts J.J.G., Steenwijk M.D.	Multicenter Evaluation of AI-generated DIR and PSIR for Cortical and Juxtacortical Multiple Sclerosis Lesion Detection	2023	*Radiology*	307,2	–
Brocki L., Dyer G.C., Gladka A., Chung N.C.	Deep Learning Mental Health Dialogue System	2023	*Proceedings – 2023 IEEE International Conference on Big Data and Smart Computing, BigComp 2023*	–	395–398
Burger B., Kanbach D.K., Kraus S., Breier M., Corvello V.	On the use of AI-based tools like ChatGPT to support management research	2023	*European Journal of Innovation Management*	26,7	233–241
Cao X., Sun G., Yu H., Guizani M.	PerFED-GAN: Personalized Federated Learning via Generative Adversarial Networks	2023	*IEEE Internet of Things Journal*	10,5	3749–3762
Carvalho I., Ivanov S.	ChatGPT for tourism: applications, benefits and risks	2023	*Tourism Review*	–	–
Castañé G., Dolgui A., Kousi N., Meyers B., Thevenin S., Vyhmeister E., Östberg P.-O.	The ASSISTANT project: AI for high level decisions in manufacturing	2023	*International Journal of Production Research*	61,7	2288–2306
Cerchia C., Lavecchia A.	New avenues in artificial-intelligence-assisted drug discovery	2023	*Drug Discovery Today*	28,4	–
Chamberlin D.E.	The Active Inference Model of Coherence Therapy	2023	*Frontiers in Human Neuroscience*	16	–
Chan C., Li F.	Developing a natural language-based AI-chatbot for social work training: an illustrative case study	2023	*China Journal of Social Work*	–	1–16
Chan R.K.C., Lim J.M.-Y., Parthiban R.	Missing Traffic Data Imputation for Artificial Intelligence in Intelligent Transportation Systems: Review of Methods, Limitations, and Challenges	2023	*IEEE Access*	11	34080–34093
Chau R.C.W., Hsung R.T.-C., McGrath C., Pow E.H.N., Lam W.Y.H.	Accuracy of artificial intelligence-designed single-molar dental prostheses: A feasibility study	2023	*Journal of Prosthetic Dentistry*	–	–
Chawla S., Nakov P., Ali A., Hall W., Khalil I., Ma X., Taha Sencar H., Weber I., Wooldridge M., Yu T.	Ten years after ImageNet: a 360° perspective on artificial intelligence	2023	*Royal Society Open Science*	10,3	–
Chen L., Qiao C., Wu M., Cai L., Yin C., Yang M., Sang X., Bai W.	Improving the Segmentation Accuracy of Ovarian-Tumor Ultrasound Images Using Image Inpainting	2023	*Bioengineering*	10,2	–
Chen M., Chen K., Liu C., Huang P., Yu L.	Theoretical and experimental study on image noise reduction for improving camera-based fire detection performance in thermal environments	2023	*Journal of Thermal Analysis and Calorimetry*	148,3	1191–1199
Chou C.-B., Lee C.-H.	Generative Neural Network-Based Online Domain Adaptation (GNN-ODA) Approach for Incomplete Target Domain Data	2023	*IEEE Transactions on Instrumentation and Measurement*	72	–
Ciftci U.A., Yuksek G., Demir I.	My Face My Choice: Privacy Enhancing Deepfakes for Social Media Anonymization	2023	*Proceedings – 2023 IEEE Winter Conference on Applications of Computer Vision, WACV 2023*	–	1369–1379
Cingillioglu I.	Detecting AI-generated essays: the ChatGPT challenge	2023	*International Journal of Information and Learning Technology*	40,3	259–268
Colton S., Banar B.	Automatically Adding to Artistic Cultures	2023	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13988 LNCS	50–66

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Cooper G.	Examining Science Education in ChatGPT: An Exploratory Study of Generative Artificial Intelligence	2023	*Journal of Science Education and Technology*	32,3	444–452
Crawford J., Cowling M., Allen K.-A.	Leadership is needed for ethical ChatGPT: Character, assessment, and learning using artificial intelligence (AI)	2023	*Journal of University Teaching and Learning Practice*	20,3	–
Cumiskey K.M., Humphreys L.	Social, seamless, just, and open: Advancing mobile communication research	2023			
Deepa, Kupparu J.	A deep learning based stereo matching model for autonomous vehicle	2023	*IAES International Journal of Artificial Intelligence*	12,1	87–95
Díaz D., Boj C.	A critical approach to Machine Learning forecast capabilities: creating a predictive biography in the age of the Internet of Behaviour (IoB) [Un enfoque crítico para las capacidades de pronóstico del aprendizaje automático: crear una biografía predictiva en la era del Internet of Behaviour (IoB)]	2023	*Artnodes*	2023,31	–
Ding H., Cui Z., Maghami E., Chen Y., Matinlinna J.P., Pow E.H.N., Fok A.S.L., Burrow M.F., Wang W., Tsoi J.K.H.	Morphology and mechanical performance of dental crown designed by 3D-DCGAN	2023	*Dental Materials*	39,3	320–332
Diwan C., Srinivasa S., Suri G., Agarwal S., Ram P.	AI-based learning content generation and learning pathway augmentation to increase learner engagement	2023	*Computers and Education: Artificial Intelligence*	4	–
Dixit A., Kaur N., Kingra S.	Review of audio deepfake detection techniques: Issues and prospects	2023	*Expert Systems*	–	e13322
Dwivedi Y.K., Kshetri N., Hughes L., Slade E.L., Jeyaraj A., Kar A. K., Baabdullah A.M., Koohang A., Raghavan V., Ahuja M., Albanna H., Albashrawi M.A., Al-Busaidi A.S., Balakrishnan J., Barlette Y., Basu S., Bose I., Brooks L., Buhalis D., Carter L., Chowdhury S., Crick T., Cunningham S.W., Davies G.H., Davison R.M., Dé R., Dennehy D., Duan Y., Dubey R., Dwivedi R., Edwards J.S., Flavián C., Gauld R., Grover V., Hu M.-C., Janssen M., Jones P., Junglas I., Khorana S., Kraus S., Larsen K. R., Latreille P., Laumer S., Malik F.T., Mardani A., Mariani M., Mithas S., Mogaji E., Nord J.H., O'Connor S., Okumus F., Pagani M., Pandey N., Papagiannidis S., Pappas I.O., Pathak N., Pries-Heje J., Raman R., Rana N.P., Rehm S.-V., Ribeiro-Navarrete S., Richter A., Rowe F., Sarker S., Stahl B.C., Tiwari M.K., van der Aalst W., Venkatesh V., Viglia G., Wade M., Walton P., Wirtz J., Wright R.	"So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy	2023	*International Journal of Information Management*	71	102642
Euchner J.	Generative AI	2023	*Research Technology Management*	66,3	71–74
Faulkner C.A., Jankowski D.S., Castellini J.E., Jr., Zuo W., Epple P., Sohn M.D., Kasgari A.T.Z., Saad W.	Fast prediction of indoor airflow distribution inspired by synthetic image generation artificial intelligence	2023	*Building Simulation*	–	–
Fink T., Akdag Salah A.A.	Extending the Visual Arts Experience: Sonifying Paintings with AI	2023	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13988 LNCS	100–116
Finnie-Ansley J., Denny P., Luxton-Reilly A., Santos E.A., Prather J., Becker B.A.	My AI Wants to Know if This Will Be on the Exam: Testing OpenAI's Codex on CS2 Programming Exercises	2023	*ACM International Conference Proceeding Series*		97–104
Fu B., Gao Y., Wang W.	Dual generative adversarial networks for automated component layout design of steel frame-brace structures	2023	*Automation in Construction*	146	–
Giuste F.O., Sequeira R., Keerthipati V., Lais P., Mirzazadeh A., Mohseni A., Zhu Y., Shi W., Marteau B., Zhong Y., Tong L., Das B., Shehata B., Deshpande S., Wang M.D.	Explainable synthetic image generation to improve risk assessment of rare pediatric heart transplant rejection	2023	*Journal of Biomedical Informatics*	139	–

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Goswami L., Deka M.K., Roy M.	Artificial Intelligence in Material Engineering: A Review on Applications of Artificial Intelligence in Material Engineering	2023	*Advanced Engineering Materials*	–	–
Goyal N., Hong S.R., Mandryk R.L., Li T.J.-J., Luther K., Wang D.	SHAI 2023: Workshop on Designing for Safety in Human-AI Interactions	2023	*International Conference on Intelligent User Interfaces, Proceedings IUI*	–	199–201
Haluza D., Jungwirth D.	Artificial Intelligence and Ten Societal Megatrends: An Exploratory Study Using GPT-3	2023	*Systems*	11,3	–
Hasenstab K.A., Huynh J., Masoudi S., Cunha G.M., Pazzani M., Hsiao A.	Feature Interpretation Using Generative Adversarial Networks (FIGAN): A Framework for Visualizing a CNN's Learned Features	2023	*IEEE Access*	11	5144–5160
Heinz M.V., Bhattacharya S., Trudeau B., Quist R., Song S.H., Lee C.M., Jacobson N.C.	Testing domain knowledge and risk of bias of a large-scale general artificial intelligence model in mental health	2023	*Digital Health*	9	–
Helberger N., Diakopoulos N.	ChatGPT and the AI Act	2023	*Internet Policy Review*	12,1	–
Hijji M., Khan A., Alwakeel M.M., Harrabi R., Aradah F., Cheikh F. A., Sajjad M., Muhammad K.	Intelligent Image Super-Resolution for Vehicle License Plate in Surveillance Applications	2023	*Mathematics*	11,4	–
Hirosawa T., Harada Y., Yokose M., Sakamoto T., Kawamura R., Shimizu T.	Diagnostic Accuracy of Differential-Diagnosis Lists Generated by Generative Pretrained Transformer 3 Chatbot for Clinical Vignettes with Common Chief Complaints: A Pilot Study	2023	*International Journal of Environmental Research and Public Health*	20,4	–
Hoggenmueller M., Lupetti M.L., Van Der Maden W., Grace K.	Creative AI for HRI Design Explorations	2023	*ACM/IEEE International Conference on Human–Robot Interaction*	–	40–50
Hoi S.C.H.	Responsible AI for Trusted AI-powered Enterprise Platforms	2023	*WSDM 2023 – Proceedings of the 16th ACM International Conference on Web Search and Data Mining*	–	1277–1278
Ikeda K.	Quantum extensive-form games	2023	*Quantum Information Processing*	22,1	–
Inan M.S.K., Hossain S., Uddin M. N.	Data augmentation guided breast cancer diagnosis and prognosis using an integrated deep-generative framework based on breast tumor's morphological information	2023	*Informatics in Medicine Unlocked*	37	–
Iskender A.	Holy or Unholy? Interview with Open AI's ChatGPT	2023	*European Journal of Tourism Research*	34	3414
Janet J.P., Mervin L., Engkvist O.	Artificial intelligence in molecular de novo design: Integration with experiment	2023	*Current Opinion in Structural Biology*	80	–
Jang S.-S., Kim C.-J., Hwang S.-Y., Lee M.-J., Ha Y.-G.	L-GAN: landmark-based generative adversarial network for efficient face de-identification	2023	*Journal of Supercomputing*	79,7	7132–7159
Jaszcz A., Prokop K., Połap D., Srivastava G., Lin J.C.-W.	Human-AI Collaboration to Increase the Perception of VR	2023	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13588 LNAI	51–60
Jittrapirom P., Bekius F., Führer K.	Visioning future transport systems with an integrated robust and generative framework	2023	*Scientific Reports*	13,1	–
Junaid M.A., Anwar S., Sikander G., Khan M.T.	Generative Adversarial Network based Chest Disease Detection and Binary Mask Generation	2023	*2023 International Conference on Robotics and Automation in Industry, ICRAI 2023*	–	1–7
Kang X., Song B., Guo J., Qin H., Du X., Guizani M.	Black-box attacks on image classification model with advantage actor-critic algorithm in latent space	2023	*Information Sciences*	624	624–638
Kanimozhi V., Jacob T.P.	The Top Ten Artificial Intelligence-Deep Neural Networks for IoT Intrusion Detection System	2023	*Wireless Personal Communications*	129,2	1451–1470
Karinshak E., Liu S.X., Park J.S., Hancock J.T.	Working With AI to Persuade: Examining a Large Language Model's Ability to Generate Pro-Vaccination Messages	2023	*Proceedings of the ACM on Human–Computer Interaction*	7,CSCW1	–
Kasturi A., Hota C.	OSGAN: One-shot distributed learning using generative adversarial networks	2023	*Journal of Supercomputing*	–	1–12
Khan U., Koivukoski S., Valkonen M., Latonen L., Ruusuvuori P.	The effect of neural network architecture on virtual H&E staining: Systematic assessment of histological feasibility	2023	*Patterns*	4,5	–
Khanjani Z., Watson G., Janeja V. P.	Audio deepfakes: A survey	2023	*Frontiers in Big Data*	5	–
Kim J., Park H.	Limited Discriminator GAN using explainable AI model for overfitting problem	2023	*ICT Express*	9,2	241–246
Kohnke L., Moorhouse B.L., Zou D.	ChatGPT for Language Teaching and Learning	2023	*RELC Journal*	–	–
Korneeva E., Salge T.O., Teubner T., Antons D.	Tracing the legitimacy of Artificial Intelligence: A longitudinal analysis of media discourse	2023	*Technological Forecasting and Social Change*	192	–

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Kralik J.D.	Toward a Comprehensive List of Necessary Abilities for Human Intelligence, Part 1: Constructing Knowledge	2023	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13539 LNAI	260–270
Lawton T., Ibarrola F.J., Ventura D., Grace K.	Drawing with Reframer: Emergence and Control in Co-Creative AI	2023	*International Conference on Intelligent User Interfaces, Proceedings IUI*	–	264–277
Lee P., Fyffe S., Son M., Jia Z., Yao Z.	A Paradigm Shift from "Human Writing" to "Machine Generation" in Personality Test Development: an Application of State-of-the-Art Natural Language Processing	2023	*Journal of Business and Psychology*	38,1	163–190
Lenatti M., Paglialonga A., Orani V., Ferretti M., Mongelli M.	Characterization of Synthetic Health Data Using Rule-Based Artificial Intelligence Models	2023	*IEEE Journal of Biomedical and Health Informatics*	–	1–9
Li C., Chrysostomou D., Zhang X., Yang H.	IRWoZ: Constructing an Industrial Robot Wizard-of-OZ Dialoguing Dataset	2023	*IEEE Access*	11,	28236–28251
Li R., Fontanini T., Prati A., Bhanu B.	Face Synthesis with a Focus on Facial Attributes Translation Using Attention Mechanisms	2023	*IEEE Transactions on Biometrics, Behavior, and Identity Science*	5,1	76–90
Li Y., Chen Y., Yang X., Cai H.	Generating Post-healing Images of Skin Diseases Based on an Adversarial Self-coding Generator	2023	*Lecture Notes in Electrical Engineering*	1019 LNEE	110–118
Lim W.M., Gunasekara A., Pallant J.L., Pallant J.I., Pechenkina E.	Generative AI and the future of education: Ragnarök or reformation? A paradoxical perspective from management educators	2023	*International Journal of Management Education*	21,2	–
Lin T.-T., Yang L.-Y., Lin C.-Y., Wang C.-T., Lai C.-W., Ko C.-F., Shih Y.-H., Chen S.-H.	Intelligent De Novo Design of Novel Antimicrobial Peptides against Antibiotic-Resistant Bacteria Strains	2023	*International Journal of Molecular Sciences*	24,7	–
Liu W.	Literature survey of multi-track music generation model based on generative confrontation network in intelligent composition	2023	*Journal of Supercomputing*	79,6	6560–6582
Liu X., Zhang W., Tong X., Zhong F., Li Z., Xiong Z., Xiong J., Wu X., Fu Z., Tan X., Liu Z., Zhang S., Jiang H., Li X., Zheng M.	MolFilterGAN: a progressively augmented generative adversarial network for triaging AI-designed molecules	2023	*Journal of Cheminformatics*	15,1	–
Lokumarambage M., Gowrisetty V., Rezaei H., Sivalingam T., Rajatheva N., Fernando A.	Wireless End-to-End Image Transmission System using Semantic Communications	2023	*IEEE Access*		1–1
Lu X., Lin Y., Lin P., He X., Fang G., Cheng S., Chen Z., Wu L.	Efficient fault diagnosis approach for solar photovoltaic array using a convolutional neural network in combination of generative adversarial network under small dataset	2023	*Solar Energy*	253	360–374
Lu X., Lu R., Zhao W., Ma E.	Facial image inpainting for big data using an effective attention mechanism and a convolutional neural network	2023	*Frontiers in Neurorobotics*	16	–
Luleci F., Catbas F.N., Avci O.	Generative adversarial networks for labeled acceleration data augmentation for structural damage detection	2023	*Journal of Civil Structural Health Monitoring*	13,1	181–198
Luleci F., Necati Catbas F., Avci O.	CycleGAN for undamaged-to-damaged domain translation for structural health monitoring and damage detection	2023	*Mechanical Systems and Signal Processing*	197,	–
Macdonald C., Adeloye D., Sheikh A., Rudan I.	Can ChatGPT draft a research article? An example of population-level vaccine effectiveness analysis	2023	*Journal of global health*	13	1003–
Maher M.L., Weisz J.D., Chilton L. B., Geyer W., Strobelt H.	HAI-GEN 2023: 4th Workshop on Human-AI Co-Creation with Generative Models	2023	*Mechanical Systems and Signal Processing*		190–192
Mahjoubi S., Barhemat R., Meng W., Bao Y.	AI-guided auto-discovery of low-carbon cost-effective ultra-high performance concrete (UHPC)	2023	*Resources, Conservation and Recycling*	189	–
Marano G.C., Rosso M.M., Aloisio A., Cirrincione G.	Generative adversarial networks review in earthquake-related engineering fields	2023	*Bulletin of Earthquake Engineering*	–	1–52
Matsuura T., Kawahara D., Saito A., Yamada K., Ozawa S., Nagata Y.	A synthesized gamma distribution-based patient-specific VMAT QA using a generative adversarial network	2023	*Medical Physics*	50,4	2488–2498
Mayrhofer-Hufnagl I., Ennemoser B.	Advancing justice in a city's complex systems using designs enabled by space	2023	*International Journal of Architectural Computing*	–	–
Mohamadipanah H., Kearse L., Wise B., Backhus L., Pugh C.	Generating Rare Surgical Events Using CycleGAN: Addressing Lack of Data for Artificial Intelligence Event Recognition	2023	*Journal of Surgical Research*	283	594–605
Mohebbi Moghaddam M., Boroomand B., Jalali M., Zareian A., Daeijavad A., Manshaei M. H., Krunz M.	Games of GANs: game-theoretical models for generative adversarial networks	2023	*Artificial Intelligence Review*	–	–
Mondal S., Das S., Vrana V.G.	How to Bell the Cat? A Theoretical Review of Generative Artificial Intelligence towards Digital Disruption in All Walks of Life	2023	*Technologies*	11,2	–

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Moon S., Lee Y., Hwang J., Kim C. G., Kim J.W., Yoon W.T., Kim J. H.	Prediction of anti-vascular endothelial growth factor agent-specific treatment outcomes in neovascular age-related macular degeneration using a generative adversarial network	2023	*Scientific Reports*	13,1	–
Myong Y., Yoon D., Kim B.S., Kim Y.G., Sim Y., Lee S., Yoon J., Cho M., Kim S.	Evaluating diagnostic content of AI-generated chest radiography: A multi-center visual Turing test	2023	*PLoS ONE*	18,45020	–
Nair R., Mohan D.D., Setlur S., Govindaraju V., Ramanathan M.	Generative models for age, race/ethnicity, and disease state dependence of physiological determinants of drug dosing	2023	*Journal of Pharmacokinetics and Pharmacodynamics*	50,2	111–122
Niederman F., Baker E.W.	Ethics and AI Issues: Old Container with New Wine?	2023	*Information Systems Frontiers*	25,1	9–28
Nikolić P.K., Bertin G.	AI.R Taletorium: Artificial Intelligence 1001 Cyber Nights [AI.R Taletorium: 1001 Cyber Nights escritas por Inteligencia Artificial]	2023	*Artnodes*	2023,31	–
Niraula D., Sun W., Jin J., Dinov I. D., Cuneo K., Jamaluddin J., Matuszak M.M., Luo Y., Lawrence T.S., Jolly S., Ten Haken R.K., El Naqa I.	A clinical decision support system for AI-assisted decision-making in response-adaptive radiotherapy (ARCliDS)	2023	*Scientific Reports*	13,1	–
Ocampo R., Andres J., Schmidt A., Pegram C., Shave J., Hill C., Wright B., Bown O.	Using GPT-3 to Achieve Semantically Relevant Data Sonificiation for an Art Installation	2023	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13988 LNCS	212–227
Ortega L., Capomaggi J.	Mediated Authorships: The Designer as the Instructor of Machines	2023	*Springer Series in Design and Innovation*	24	401–408
Papaioannidis C., Mademlis I., Pitas I.	Fast CNN-Based Single-Person 2D Human Pose Estimation for Autonomous Systems	2023	*IEEE Transactions on Circuits and Systems for Video Technology*	33,3	1262–1275
Papia E.-M., Kondi A., Constantoudis V.	Entropy and complexity analysis of AI-generated and human-made paintings	2023	*Chaos, Solitons and Fractals*	170	–
Papillon M., Pettee M., Miolane N.	PirouNet: Creating Dance Through Artist-Centric Deep Learning	2023	*Lecture Notes of the Institute for Computer Sciences, Social–Informatics and Telecommunications Engineering, LNICST*	479 LNICST,	447–465
Park C., Lee J., Kim Y., Park J.-G., Kim H., Hong D.	An Enhanced AI-Based Network Intrusion Detection System Using Generative Adversarial Networks	2023	*IEEE Internet of Things Journal*	10,3	2330–2345
Pavlik J.V.	Collaborating With ChatGPT: Considering the Implications of Generative Artificial Intelligence for Journalism and Media Education	2023	*Journalism and Mass Communication Educator*	78,1	84–93
Peng H., Wu C., Nguyen D., Schuemann J., Mairani A., Pu Y., Jiang S.	Recent Advancements of Artificial Intelligence in Particle Therapy	2023	*IEEE Transactions on Radiation and Plasma Medical Sciences*	7,3	213–224
Peres R., Schreier M., Schweidel D., Sorescu A.	On ChatGPT and beyond: How generative artificial intelligence may affect research, teaching, and practice	2023	*International Journal of Research in Marketing*	–	–
Pornpongtechavanich P., Nilsook P., Wannapiroon P.	Gamers' Total Experience and Game Motivation for Further Education Digital Manpower	2023	*International Journal of Emerging Technologies in Learning*	18,5	62–78
Qasem F.	ChatGPT in scientific and academic research: future fears and reassurances	2023	*Library Hi Tech News*	–	–
Qi Y., Yuan C., Li P., Kong Q.	Damage analysis and quantification of RC beams assisted by Damage-T Generative Adversarial Network	2023	*Engineering Applications of Artificial Intelligence*	117	–
Ranjan A., Kumar H., Kumari D., Anand A., Misra R.	Molecule generation toward target protein (SARS-CoV-2) using reinforcement learning-based graph neural network via knowledge graph	2023	*Network Modeling Analysis in Health Informatics and Bioinformatics*	12,1	–
Ranjan R., Ullah S., Sahoo S.S., Kumar A.	SyFAxO-GeN: Synthesizing FPGA-Based Approximate Operators with Generative Networks	2023	*Proceedings of the Asia and South Pacific Design Automation Conference, ASP–DAC*	–	402–409
Ray P.P.	ChatGPT: A comprehensive review on background, applications, key challenges, bias, ethics, limitations and future scope	2023	*Internet of Things and Cyber–Physical Systems*	3	121–154
Reddy M.V.K., Murjani P.K., Rajkumar S., Chen T., Chandrasekar V.S.A.	Optimized CNN Model with Deep Convolutional GAN for Brain Tumor Detection	2023	*Lecture Notes in Networks and Systems*	608	409–425
Ren F., Ding X., Zheng M., Korzinkin M., Cai X., Zhu W., Mantsyzov A., Aliper A., Aladinskiy V., Cao Z., Kong S., Long X., Man Liu B.H., Liu Y., Naumov V., Shneyderman A., Ozerov I.V., Wang J., Pun F.W., Polykovskiy D.A., Sun C., Levitt	AlphaFold accelerates artificial intelligence powered drug discovery: efficient discovery of a novel CDK20 small molecule inhibitor	2023	*Chemical Science*	14,6	1443–1452

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
M., Aspuru-Guzik A., Zhavoronkov A.					
Romano J.D., Mei L., Senn J., Moore J.H., Mortensen H.M.	Exploring genetic influences on adverse outcome pathways using heuristic simulation and graph data science	2023	*Computational Toxicology*	25	100261
Salvagno M., Taccone F.S., Gerli A. G., ChatGPT	Can artificial intelligence help for scientific writing?	2023	*Critical Care*	27,1	1–5
Sass S., Höfer M., Schmidt M., Schmidt S.	Autonomous Cargo Bike Fleets - Approaches for AI-Based Trajectory Forecasts of Road Users	2023	*Transport and Telecommunication*	24,1	55–64
Scoon K., Samara K.	Synthesizing Pokémon Trading Cards Using Nvidia StyleGAN2 from Home	2023	*Lecture Notes in Networks and Systems*	543 LNNS	646–654
Shapira N., Kalinsky O., Libov A., Shani C., Tolmach S.	Evaluating Humorous Response Generation to Playful Shopping Requests	2023	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13981 LNCS	617–626
Shoeibi A., Khodatars M., Jafari M., Ghassemi N., Moridian P., Alizadehsani R., Ling S.H., Khosravi A., Alinejad-Rokny H., Lam H.K., Fuller-Tyszkiewicz M., Acharya U.R., Anderson D., Zhang Y., Gorriz J.M.	Diagnosis of brain diseases in fusion of neuroimaging modalities using deep learning: A review	2023	*Information Fusion*	93	85–117
Sikder M.N.K., Nguyen M.B.T., Elliott E.D., Batarseh F.A.	Deep H2O: Cyber attacks detection in water distribution systems using deep learning	2023	*Journal of Water Process Engineering*	52	103568
Simian D., Husac F.	Challenges and Opportunities in Deep Learning Driven Fashion Design and Textiles Patterns Development	2023	*Communications in Computer and Information Science*	1761 CCIS	173–187
Singla S., Eslami M., Pollack B., Wallace S., Batmanghelich K.	Explaining the black-box smoothly—A counterfactual approach	2023	*Medical Image Analysis*	84	120721
Smith J.B., Freeman J.	Effects of Visual Explanation on Perceived Creative Autonomy in an AI-Based Generative Music System	2023	*International Conference on Intelligent User Interfaces, Proceedings IUI*	–	25–28
Sobhanmanesh F., Beheshti A., Nouri N., Chapparo N.M., Raj S., George R.A.	A Cognitive Model for Technology Adoption	2023	*Algorithms*	16,3	–
Striuk O.S., Kondratenko Y.P.	Generative Adversarial Networks in Cybersecurity: Analysis and Response	2023	*Studies in Computational Intelligence*	1087	373–388
Su J., Yang W.	Unlocking the Power of ChatGPT: A Framework for Applying Generative AI in Education	2023	*ECNU Review of Education*	–	–
Tao Y., Ma X., Zhang Y., Huang K., Ji Z., Fan W., Yuan S., Chen Q.	LAGAN: Lesion-Aware Generative Adversarial Networks for Edema Area Segmentation in SD-OCT Images	2023	*IEEE Journal of Biomedical and Health Informatics*		1–12
Thurzo A., Strunga M., Urban R., Surovková J., Afrashtehfar K.I.	Impact of Artificial Intelligence on Dental Education: A Review and Guide for Curriculum Update	2023	*Education Sciences*	13,2	150
Tlili A., Shehata B., Adarkwah M. A., Bozkurt A., Hickey D.T., Huang R., Agyemang B.	What if the devil is my guardian angel: ChatGPT as a case study of using chatbots in education	2023	*Smart Learning Environments*	10,1	15
Ucak U.V., Ashyrmamatov I., Lee J.	Reconstruction of lossless molecular representations from fingerprints	2023	*Journal of Cheminformatics*	15,1	1–11
Varshney K.R., Varshney L.R.	A Banal Account of a Safety-Creativity Tradeoff in Generative AI	2023	*CEUR Workshop Proceedings*	3359	163–165
Vartiainen H., Tedre M.	Using artificial intelligence in craft education: crafting with text-to-image generative models	2023	*Digital Creativity*	34,1	1–21
Vechtomova O., Sahu G.	LyricJam Sonic: A Generative System for Real-Time Composition and Musical Improvisation	2023	*Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*	13988 LNCS	292–307
Victor B.G., Kubiak S., Angell B., Perron B.E.	Time to Move Beyond the ASWB Licensing Exams: Can Generative Artificial Intelligence Offer a Way Forward for Social Work?	2023	*Research on Social Work Practice*	–	–
Vogel G., Schulze Balhorn L., Schweidtmann A.M.	Learning from flowsheets: A generative transformer model for autocompletion of flowsheets	2023	*Computers and Chemical Engineering*	171	–
Wang D., Fu Y., Liu K., Chen F., Wang P., Lu C.-T.	Automated Urban Planning for Reimagining City Configuration via Adversarial Learning: Quantification, Generation, and Evaluation	2023	*ACM Transactions on Spatial Algorithms and Systems*	9,1	–
Wang Q., Guo C., Dai H.-N., Li P.	Stroke-GAN Painter: Learning to paint artworks using stroke-style generative adversarial networks	2023	*Computational Visual Media*	–	1–20
Wang Y., Qin Y., Deng D., Wei J., Zhou Y., Fan Y., Chen T., Sun H., Liu L., Wei S., Yin S.	An Energy-Efficient Transformer Processor Exploiting Dynamic Weak Relevances in Global Attention	2023	*IEEE Journal of Solid–State Circuits*	58,1	227–242

(*continued on next page*)

(*continued*)

Authors	Title	Year	Source	Vol, No.	Pages
Wang Y.-R.J., Wang P., Adams L. C., Sheybani N.D., Qu L., Sarrami A.H., Theruvath A.J., Gatidis S., Ho T., Zhou Q., Pribnow A., Thakor A.S., Rubin D., Daldrup-Link H.E.	Low-count whole-body PET/MRI restoration: an evaluation of dose reduction spectrum and five state-of-the-art artificial intelligence models	2023	*European Journal of Nuclear Medicine and Molecular Imaging*	50,5	1337–1350
Watson D.S.	On the Philosophy of Unsupervised Learning	2023	*Philosophy and Technology*	36,2	–
Weisz J.D., Muller M., He J., Houde S.	Toward General Design Principles for Generative AI Applications	2023	*CEUR Workshop Proceedings*	3359	130–144
Williams M.C., Shambrook J.	How will artificial intelligence transform cardiovascular computed tomography? A conversation with an AI model	2023	*Journal of Cardiovascular Computed Tomography*	–	–
Yan K., Chen X., Zhou X., Yan Z., Ma J.	Physical Model Informed Fault Detection and Diagnosis of Air Handling Units Based on Transformer Generative Adversarial Network	2023	*IEEE Transactions on Industrial Informatics*	19,2	2192–2199
Yang B., Zhang Q., Geng R., Wang L., Liu M.	Real-Time Neural Dense Elevation Mapping for Urban Terrain with Uncertainty Estimations	2023	*IEEE Robotics and Automation Letters*	8,2	696–703
Yang J., Zhang G., Chen B., Wang Y.	Vibration Signal Augmentation Method for Fault Diagnosis of Low-Voltage Circuit Breaker Based on W-CGAN	2023	*IEEE Transactions on Instrumentation and Measurement*	72	1–11
Yao K., Zheng Y.	Fundamentals of Machine Learning	2023	*Springer Series in Optical Sciences*	241	77–112
Yeo M.A.	Academic integrity in the age of Artificial Intelligence (AI) authoring apps	2023	*TESOL Journal*	–	e716
Yu Y., Zhang Z., Duan W., Srivastava A., Shah R., Ren Y.	Conditional hybrid GAN for melody generation from lyrics	2023	*Neural Computing and Applications*	35,4	3191–3202
Zeilinger M.	The Politics of Visual Indeterminacy in Abstract AI Art	2023	*Leonardo*	56,1	76–80
Zhang F., Zhang Y., Zhang X.	Desensitization method of meteorological data based on differential privacy protection	2023	*Journal of Cleaner Production*	389	136117
Zhang H., Zhao J., Shen Y., Tian J.	Deep Generative Adversarial Network for Direct Super-resolution Magnetic Particle Imaging Reconstruction	2023	*International Journal on Magnetic Particle Imaging*	9	–
Zhang Z., Ishihata H., Maruyama R., Kasai T., Kameda H., Sugiyama T.	Deep Learning of Phase-Contrast Images of Cancer Stem Cells Using a Selected Dataset of High Accuracy Value Using Conditional Generative Adversarial Networks	2023	*International Journal of Molecular Sciences*	24,6	5323
Zhang Z., Kumar V., Mayo M., Bifet A.	Assessing Vulnerability from Its Description	2023	*Communications in Computer and Information Science*	1768 CCIS	129–143
Zheng S.	StyleGAN-Canvas: Augmenting StyleGAN3 for Real-Time Human-AI Co-Creation	2023	*CEUR Workshop Proceedings*	3359	108–120
Zhou Z., Huang G., Su Z., Li Y., Hua W.	Dynamic Attention-Based CVAE-GAN for Pedestrian Trajectory Prediction	2023	*IEEE Robotics and Automation Letters*	8,2	704–711
Zignoli A.	Machine Learning Models for the Automatic Detection of Exercise Thresholds in Cardiopulmonary Exercising Tests: From Regression to Generation to Explanation	2023	*Sensors*	23,2	826

References

Pretrained Models — Sentence-Transformers documentation." https://www.sbert.net/docs/pretrained_models.html (accessed..

Abduljawad, M., & Alsalmani, A. (2022). Towards creating exotic remote sensing datasets using image generating AI. In *2022 international conference on electrical and computing technologies and applications (ICECTA)* (pp. 84–88). IEEE.

Acumen Research and Consulting. "Generative AI Market Size Will Achieve USD 110.8 Billion by 2030 growing at 34.3% CAGR - Exclusive Report by Acumen Research and Consulting." https://www.globenewswire.com/news-release/2022/12/14/2574140/0/en/Generative-AI-Market-Size-Will-Achieve-USD-110-8-Billion-by-2030-growing-at-34-3-CAGR-Exclusive-Report-by-Acumen-Research-and-Consulting.html (accessed..

Adewumi, A. O., & Akinyelu, A. A. (2017). A survey of machine-learning and nature-inspired based credit card fraud detection techniques. *International Journal of System Assurance Engineering and Management, 8*, 937–953.

Afzal, M., Li, R. Y. M., Ayyub, M. F., Shoaib, M., & Bilal, M. (2023). Towards BIM-based sustainable structural design optimization: A systematic review and industry perspective. *Sustainability, 15*(20), Article 15117.

Ali, S., DiPaola, D., & Breazeal, C. (2021). What are GANs?: Introducing generative adversarial networks to middle school students. *Proceedings of the AAAI Conference on Artificial Intelligence, 35*(17), 15472–15479.

Alsharhan, A., Al-Emran, M., & Shaalan, K. (2023). *Chatbot adoption: A multiperspective systematic review and future research agenda* (pp. 1–13). IEEE Transactions on Engineering Management. https://doi.org/10.1109/TEM.2023.3298360

Andrews, J. T., et al. (2023). *Ethical considerations for collecting human-centric image datasets. arXiv preprint arXiv:2302.03629*.

Angelov, D. (2020). *Top2Vec: Distributed representations of topics*. https://doi.org/10.48550/arXiv.2008.09470. /08/19/2020.

Atzeni, D., Bacciu, D., Mazzei, D., & Prencipe, G. (2022). A systematic review of Wi-Fi and machine learning integration with topic modeling techniques (in eng) *Sensors, 22*(13), 4925. https://doi.org/10.3390/s22134925. /06/29/2022.

Aziz, S., & Dowling, M. (2019). Machine learning and AI for risk management. In *Disrupting finance: FinTech and strategy in the 21st century* (pp. 33–50).

Bafna, P., Pramod, D., & Vaidya, A. (2016). *Document clustering* (pp. 61–66). TF-IDF approach. https://doi.org/10.1109/ICEEOT.2016.7754750, 2016.

Bahroun, Z., Anane, C., Ahmed, V., & Zacca, A. (2023). Transforming education: A comprehensive review of generative artificial intelligence in educational settings through bibliometric and content analysis. *Sustainability, 15*(17), Article 12983.

Beheshti, A., et al. (2023). *ProcessGPT: Transforming business process management with generative artificial intelligence. arXiv preprint arXiv:2306.01771*.

Bianchi, F., Terragni, S., & Hovy, D. (2021). Pre-training is a hot topic: Contextualized document embeddings improve topic coherence, 2021/08//. In *ACL-IJCNLP 2021* (pp. 759–766). Association for Computational Linguistics. https://doi.org/10.18653/v1/2021.acl-short.96 [Online]. Available: https://aclanthology.org/2021.acl-short.96.

Bin, G., Gao, J., Li, X., & Dhillon, B. (2012). Early fault diagnosis of rotating machinery based on wavelet packets—empirical mode decomposition feature extraction and neural network. *Mechanical Systems and Signal Processing, 27*, 696–711.

Blei, D. M., Ng, A. Y., & Jordan, M. I. (2003). Latent dirichlet allocation. *Journal of Machine Learning Research, 3*(10).

Borrajo, D., & Veloso, M. (1997). Lazy incremental learning of control knowledge for efficiently obtaining quality plans. *Artificial Intelligence Review, 11*(1–5), 371–405. https://doi.org/10.1023/A:1006549800144

Bost, R., Popa, R. A., Tu, S., & Goldwasser, S. (2014). *Machine learning classification over encrypted data*. Cryptology ePrint Archive.

Brynjolfsson, E., Li, D., & Raymond, L. R. (2023). *Generative AI at work*. National Bureau of Economic Research.

Carbonell, J. R. (1970). AI in CAI: An artificial-intelligence approach to computer-assisted instruction. *IEEE Transactions on Man-Machine Systems, 11*(4), 190–202.

Ce Zhou, Q. L., Chen, L., Yu, J., Liu, Y., Wang, G., Zhang, K., Cheng, J., Yan, Q., He, L., Peng, H., Li, J., Wu, J., Liu, Z., Xie, P., Xiong, C., Pei, J., Yu, P. S., & Sun, L. (2023). A comprehensive survey on pretrained foundation models: A history from BERT to ChatGPT. Available: https://dx.doi.org/10.48550/arxiv.2302.09419.

Cheng, Y., Gong, Y., Liu, Y., Song, B., & Zou, Q. (2021). Molecular design in drug discovery: A comprehensive review of deep generative models. *Briefings in Bioinformatics, 22*(6), bbab344.

Chien-Chang Lin, A. Y. Q. H., & Yang, S. J. H. (2023). A review of AI-driven conversational chatbots implementation methodologies and challenges (1999-2022). *Sustainability, 15*. https://doi.org/10.3390/su15054012

Civit, M., Civit-Masot, J., Cuadrado, F., & Escalona, M. J. (2022). A systematic review of artificial intelligence-based music generation: Scope, applications, and future trends. In *Expert systems with applications*, Article 118190.

Cristianini, N., & Shawe-Taylor, J. (2000). *An introduction to support vector machines and other kernel-based learning methods*. Cambridge university press.

Dalalah, D., & Dalalah, O. M. (2023). The false positives and false negatives of generative AI detection tools in education and academic research: The case of ChatGPT. *International Journal of Management in Education, 21*(2), Article 100822.

D. Dasgupta, D. Venugopal, and K. D. Gupta, "A review of generative AI from historical perspectives.".

De Prado, M. L. (2018). *Advances in financial machine learning*. John Wiley & Sons.

De Silva, D., Sierla, S., Alahakoon, D., Osipov, E., Yu, X., & Vyatkin, V. (2020). Toward intelligent industrial informatics: A review of current developments and future directions of artificial intelligence in industrial applications. *IEEE Industrial Electronics Magazine, 14*(2), 57–72.

Devlin, J., Chang, M.-W., Lee, K., & Toutanova, K. (2019). *BERT: Pre-Training of deep bidirectional transformers for language understanding*. https://doi.org/10.48550/arXiv.1810.04805

Duong, D., & Solomon, B. D. (2023). Analysis of large-language model versus human performance for genetics questions. *medRxiv*. https://doi.org/10.1101/2023.01.27.23285115 (in eng).

Dwivedi, Y. K., et al. (2023). Opinion paper: "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management, 71*, Article 102642. https://doi.org/10.1016/j.ijinfomgt.2023.102642

Dwivedi, Y. K., et al. (2023b). "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management, 71*, Article 102642.

Dwivedi, Y. K., Pandey, N., Currie, W., & Micu, A. (2023). *Leveraging ChatGPT and other generative artificial intelligence (AI)-based applications in the hospitality and tourism industry: Practices, challenges and research agenda*. International Journal of Contemporary Hospitality Management.

Ebert, C., & Louridas, P. (2023). Generative AI for software practitioners. *IEEE Software, 40*(4), 30–38. https://doi.org/10.1109/MS.2023.3265877

Epstein, Z., et al. (2023). Art and the science of generative AI. *Science, 380*(6650), 1110–1111.

Epstein, Z., Levine, S., Rand, D. G., & Rahwan, I. (2020). Who gets credit for ai-generated art? *iScience, 23*(9), Article 101515.

Eshraghian, J. K. (2020). Human ownership of artificial creativity. *Nature Machine Intelligence, 2*(3), 157–160. https://doi.org/10.1038/s42256-020-0161-x

Ester, M., Kriegel, H.-P., Sander, J., & Xu, X. (1996). *A density-based algorithm for discovering clusters in large spatial databases with noise* (Vol. 96, pp. 226–231). and others.

Févotte, C., & Idier, J. (2011). Algorithms for nonnegative Matrix factorization with the β-divergence. *Neural Computation, 23*(9), 2421–2456. https://doi.org/10.1162/NECO_a_00168

Faedda, B. (2021). Fashion and technology: Hand and machine in (high-end) fashion design. In *The routledge companion to fashion studies* (pp. 122–128). Routledge.

Fahimnia, B., Sarkis, J., & Davarzani, H. (2015). Green supply chain management: A review and bibliometric analysis. *International Journal of Production Economics, 162*, 101–114.

Fan, L., Li, L., Ma, Z., Lee, S., Yu, H., & Hemphill, L. (2023). *A bibliometric review of large Language Models research from 2017 to 2023*. https://doi.org/10.48550/arXiv.2304.02020, 2023/04/03/.

Fjeld, J., & Kortz, M. (2017). A legal anatomy of AI-generated art: Part I. *Journal of Law and Technology*.

Fui-Hoon Nah, F., Zheng, R., Cai, J., Siau, K., & Chen, L. (2023). *Generative AI and ChatGPT: Applications, challenges, and AI-human collaboration* (Vol. 25, pp. 277–304). Taylor & Francis.

Gómez-Bombarelli, R., et al. (2018). Automatic chemical design using a data-driven continuous representation of molecules. *ACS Central Science, 4*(2), 268–276.

Garg, R. K., Urs, V. L., Agarwal, A. A., Chaudhary, S. K., Paliwal, V., & Kar, S. K. (2023). Exploring the role of ChatGPT in patient care (diagnosis and treatment) and medical research: A systematic review. *Health Promotion Perspectives, 13*(3), 183.

Gartner. "Beyond ChatGPT: The Future of Generative AI for Enterprises." https://www.gartner.com/en/articles/beyond-chatgpt-the-future-of-generative-ai-for-enterprises (accessed..

Goodfellow, I., et al. (2020). Generative adversarial networks. *Communications of the ACM, 63*(11), 139–144.

Grootendorst, M. (2022). *BERTopic: Neural topic modeling with a class-based TF-IDF procedure*. https://doi.org/10.48550/arXiv.2203.05794, 2022/03/11/.

Guan, C., Ding, D., Gupta, P., Hung, Y.-C., & Jiang, Z. (2023). A systematic review of research on ChatGPT: The user perspective. In *Exploring cyber criminals and data privacy measures* (pp. 124–150).

Guo, X., Chen, L., & Shen, C. (2016). Hierarchical adaptive deep convolution neural network and its application to bearing fault diagnosis. *Measurement, 93*, 490–502.

Heaton, J. B., Polson, N. G., & Witte, J. H. (2017). Deep learning for finance: Deep portfolios. *Applied Stochastic Models in Business and Industry, 33*(1), 3–12.

Helberger, N., & Diakopoulos, N. (2023). ChatGPT and the AI act. *Internet Policy Review, 12*(1).

Hsu, Y.-C., & Ching, Y.-H. (2023). Generative artificial intelligence in education, Part One: The dynamic frontier. *TechTrends*, 1–5.

Huang, G., Song, S., Gupta, J. N., & Wu, C. (2014). Semi-supervised and unsupervised extreme learning machines. *IEEE Transactions on Cybernetics, 44*(12), 2405–2417.

Imran, M., & Almusharraf, N. (2023). Analyzing the role of ChatGPT as a writing assistant at higher education level: A systematic review of the literature. *Contemporary Educational Technology, 15*(4), ep464.

Iyengar, R., Near, J. P., Song, D., Thakkar, O., Thakurta, A., & Wang, L. (2019). Towards practical differentially private convex optimization. In *2019 IEEE symposium on security and privacy (SP)* (pp. 299–316). IEEE.

Jarrahi, M. H. (2018). Artificial intelligence and the future of work: Human-AI symbiosis in organizational decision making. *Business Horizons, 61*(4), 577–586.

Javaid, M., Haleem, A., & Singh, R. P. (2023). ChatGPT for healthcare services: An emerging stage for an innovative perspective. *BenchCouncil Transactions on Benchmarks, Standards and Evaluations, 3*(1), Article 100105.

K. Jeblick *et al.*, "ChatGPT makes medicine easy to swallow: An exploratory case study on simplified radiology reports," *arXiv pre-print server,* 2022-12-30 2022, doi: None arxiv:2212.14882.

Jiang, F., et al. (2023). Generative urban design: A systematic review on problem formulation, design generation, and decision-making. In *Progress in planning*, Article 100795. https://doi.org/10.1016/j.progress.2023.100795

Jolliffe, I. T., & Cadima, J. (2016). Principal component analysis: A review and recent developments, 2065 *Philosophical Transactions of the Royal Society A: Mathematical, Physical & Engineering Sciences, 374*, Article 20150202.

Jungwirth, D., & Haluza, D. (2023). Artificial intelligence and public health: An exploratory study. *International Journal of Environmental Research and Public Health, 20*(5), 4541.

Kanbach, D. K., Heiduk, L., Blueher, G., Schreiter, M., & Lahmann, A. (2023). The GenAI is out of the bottle: Generative artificial intelligence from a business model innovation perspective. *Review of Managerial Science*, 1–32.

Kaplan, A., & Haenlein, M. (2019). Siri, siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. *Business Horizons, 62*(1), 15–25.

Kasneci, E., et al. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences, 103*, Article 102274.

Kasneci, E., et al. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences, 103*, Article 102274. https://doi.org/10.1016/j.lindif.2023.102274

Katz, D. M., Bommarito, M. J., Gao, S., & Arredondo, P. (2023). *Gpt-4 passes the bar exam. Available at: SSRN 4389233*.

Kavazi, D., et al. (2021). *Humanode whitepaper: You are [not] a bot. arXiv preprint arXiv: 2111.13189*.

Khabiri, E., Li, Y., Mazzoleni, P., & Vadgama, D. (2019). Cognitive color palette creation using client message and color psychology. *IBM Journal of Research and Development, 63*(1), 4: 1-4: 10.

Khan, A. (2017). *Adapt: How humans are tapping into nature's secrets to design and build a better future: How humans are tapping into nature's secrets to design and build a better future*. St. Martin's Press.

Khoo, B., Phan, R. C. W., & Lim, C. H. (2022). Deepfake attribution: On the source identification of artificially generated images. *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery, 12*(3), Article e1438.

Kolchyna, O., Souza, T. T., Treleaven, P., & Aste, T. (2015). *Twitter sentiment analysis: Lexicon method, machine learning method and their combination. arXiv preprint arXiv: 1507.00955*.

Konečný, J., McMahan, H. B., Ramage, D., & Richtárik, P. (2016). *Federated optimization: Distributed machine learning for on-device intelligence. arXiv preprint arXiv:1610.02527*.

Kung, T. H., et al. (2023). Performance of ChatGPT on USMLE: Potential for AI-assisted medical education using large language models. *PLoS digital health, 2*(2), Article e0000198.

Kushwaha, A. K., & Kar, A. K. (2021). MarkBot–a language model-driven chatbot for interactive marketing in post-modern world. *Information Systems Frontiers*, 1–18.

Lang, O., et al. (2023). *Using generative AI to investigate medical imagery models and datasets. arXiv preprint arXiv:2306.00985*.

Leiser, M. (2022). Bias, journalistic endeavours, and the risks of artificial intelligence. In *Artificial intelligence and the media* (pp. 8–32). Edward Elgar Publishing.

Li, T., Sanjabi, M., Beirami, A., & Smith, V. (2019). *Fair resource allocation in federated learning. arXiv preprint arXiv:1905.10497*.

Lin, X. (2023). Exploring the role of ChatGPT as a facilitator for motivating self-directed learning among adult learners. *Adult Learning*, Article 10451595231184928.

Liu, W., Chen, L., Chen, Y., & Zhang, W. (2020). Accelerating federated learning via momentum gradient descent. *IEEE Transactions on Parallel and Distributed Systems, 31*(8), 1754–1766.

Liu, J., Li, Q., Chen, W., Yan, Y., & Wang, X. (2018). A fast fault diagnosis method of the PEMFC system based on extreme learning machine and Dempster–Shafer evidence theory. *IEEE Transactions on Transportation Electrification, 5*(1), 271–284.

Lou, Y., Kumar, A., & Xiang, J. (2022). Machinery fault diagnosis based on domain adaptation to bridge the gap between simulation and measured signals. *IEEE Transactions on Instrumentation and Measurement, 71*, 1–9.

Lu, X., Liu, W., Zhou, C., & Huang, M. (2016). Probabilistic weighted support vector machine for robust modeling with application to hydraulic actuator. *IEEE Transactions on Industrial Informatics, 13*(4), 1723–1733.

Luo, B., Lau, R. Y. K., Li, C., & Si, Y.-W. (2022). A critical review of state-of-the-art chatbot designs and applications. *WIREs Data Mining and Knowledge Discovery, 12*(1), 1434. https://doi.org/10.1002/widm.1434

Méndez-Lucio, O., Baillif, B., Clevert, D.-A., Rouquié, D., & Wichard, J. (2020). De novo generation of hit-like molecules from gene expression signatures using artificial intelligence. *Nature Communications, 11*(1), 10.

Maaten, L.v. d., & Hinton, G. (2008). Visualizing Data using t-SNE. *Journal of Machine Learning Research, 9*(86), 2579–2605, 2008. [Online]. Available: http://jmlr.org/papers/v9/vandermaaten08a.html.

Maerten, A.-S., & Soydaner, D. (2023). *From paintbrush to pixel: A review of deep neural networks in AI-generated art. arXiv preprint arXiv:2302.10913*.

Malinka, K., Perešíni, M., Firc, A., Hujňák, O., & Januš, F. (2023). *On the educational impact of ChatGPT: Is Artificial Intelligence ready to obtain a university degree?. arXiv preprint arXiv:2303.11146*.

Mawhorter, P., & Mateas, M. (2010). Procedural level generation using occupancy-regulated extension. In *Proceedings of the 2010 IEEE conference on computational intelligence and games* (pp. 351–358). IEEE.

McInnes, L., Healy, J., & Astels, S. (2017). hdbscan: Hierarchical density based clustering. *Journal of Open Source Software, 2*(11), 205.

McInnes, L., Healy, J., & Melville, J. (2020). *UMAP: Uniform Manifold approximation and projection for dimension reduction*. https://doi.org/10.48550/arXiv.1802.03426

McKinsey & Company. "What is generative AI? ." https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-generative-ai (accessed.

McKinsey & Company. "The economic potential of generative AI: The next productivity frontier." https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier#business-value (accessed..

Mhlanga, D. (2023). *Open AI in education, the responsible and ethical use of ChatGPT towards lifelong learning*.

Mirsky, Y., & Lee, W. (2021). The creation and detection of deepfakes: A survey. *ACM Computing Surveys, 54*(1), 1–41.

Mohassel, P., & Rindal, P. (2018). ABY3: A mixed protocol framework for machine learning. In *Proceedings of the 2018 ACM SIGSAC conference on computer and communications security* (pp. 35–52).

Nastasi, A. J., Courtright, K. R., Halpern, S. D., & Weissman, G. E. (2023). Does ChatGPT provide appropriate and equitable medical advice?: A vignette-based, clinical evaluation across care contexts. *medRxiv*, 2023, 02. 25.23286451.

Neupane, S., Fernandez, I. A., Mittal, S., & Rahimi, S. (2023). *Impacts and risk of generative AI technology on cyber defense. arXiv preprint arXiv:2306.13033*.

Ng, C. K. (2023). Generative adversarial network (generative artificial intelligence) in pediatric radiology: A systematic review. *Children, 10*(8), 1372.

O'Malley, P. (2006). Pharmaceutical advertising and clinical nurse specialist practice. *Clinical Nurse Specialist, 20*(1) [Online]. Available: https://journals.lww.com/cns-journal/Fulltext/2006/01000/Pharmaceutical_Advertising_and_Clinical_Nurse.5.aspx.

Oksanen, A., et al. (2023). Artificial intelligence in fine arts: A systematic review of empirical research. In *Computers in human behavior: Artificial humans*, Article 100004.

R. Omar, O. Mangukiya, P. Kalnis, and E. Mansour, "ChatGPT versus traditional question answering for knowledge graphs: Current status and future directions towards knowledge graph chatbots," *arXiv pre-print server,* 2023-02-08 2023, doi: None arxiv:2302.06466..

Osuala, R., et al. (2023). medigan: a Python library of pretrained generative models for medical image synthesis. *Journal of Medical Imaging, 10*(6), 61403, 061403.

Parr, T., Sajid, N., Costa, L., Mirza, M. B., & Friston, K. J. (2021). Generative models for active vision. *Frontiers in Neurorobotics, 15*, Article 651432. https://doi.org/10.3389/fnbot.2021.651432

Paul, S. M., et al. (2010). How to improve R&D productivity: The pharmaceutical industry's grand challenge. *Nature Reviews Drug Discovery, 9*(3), 203–214.

Qu, Y., Uddin, M. P., Gan, C., Xiang, Y., Gao, L., & Yearwood, J. (2022). Blockchain-enabled federated learning: A survey. *ACM Computing Surveys, 55*(4), 1–35.

Rabcan, J., Levashenko, V., Zaitseva, E., Kvassay, M., & Subbotin, S. (2019). Application of fuzzy decision tree for signal classification. *IEEE Transactions on Industrial Informatics, 15*(10), 5425–5434.

Raju, S. V., Bolla, B. K., Nayak, D. K., & Kh, J. (2022). *Topic modelling on consumer financial protection bureau data: An approach using BERT based embeddings* (pp. 1–6). IEEE, 2022.

Reinhard, A. (2021). Archeology of abandoned human settlements in No man's sky: A new approach to recording and preserving user-generated content in digital games. *Games and Culture, 16*(7), 855–884.

Richman, R. (2018). *AI in actuarial science. Available at: SSRN 3218082*.

Romdhani, S., Blanz, V., & Vetter, T. (2002). Face identification by fitting a 3d morphable model using linear shape and texture error functions. In *, Vol. 7. Computer vision—ECCV 2002: 7th European conference on computer vision Copenhagen, Denmark, may 28–31, 2002 proceedings, Part IV* (pp. 3–19). Springer.

Śmietanka, M., Koshiyama, A., & Treleaven, P. (2021). Algorithms in future insurance markets. *International Journal of Data Science and Big Data Analytics, 1*(1), 1–19.

Sakib Shahriar, K. H. (2023). *Let's have a chat! A conversation with ChatGPT: Technology, applications, and limitations*.

Sallam, M. (2023). ChatGPT utility in healthcare education, research, and practice: Systematic review on the promising perspectives and valid concerns. *Healthcare, 11*(6), 887. https://doi.org/10.3390/healthcare11060887

Segler, M. H., Kogej, T., Tyrchan, C., & Waller, M. P. (2018). Generating focused molecule libraries for drug discovery with recurrent neural networks. *ACS Central Science, 4*(1), 120–131.

Shaji George, A. S. H. G. A., & Gabrio Martin, A. S. (2023). A review of ChatGPT AI's impact on several business sectors. *Partners Universal International Innovation Journal, 1*(1), 15. https://doi.org/10.5281/zenodo.7644359

Shanahan, M. (2022). *Talking about large language models. arXiv preprint arXiv: 2212.03551*.

Sharma, R., Fantin, A.-R., Prabhu, N., Guan, C., & Dattakumar, A. (2016). Digital literacy and knowledge societies: A grounded theory investigation of sustainable development. *Telecommunications Policy, 40*(7), 628–643.

Sharma, R. S., Malone, L. G., Guan, C., & Dattakumar, A. (2018). A maturity model for digital literacies and sustainable development. In *Encyclopedia of information science and technology* (4th ed., pp. 2280–2291). IGI Global.

Shortliffe, E. H., Davis, R., Axline, S. G., Buchanan, B. G., Green, C. C., & Cohen, S. N. (1975). Computer-based consultations in clinical therapeutics: Explanation and rule acquisition capabilities of the MYCIN system. *Computers and Biomedical Research, 8*(4), 303–320.

Sim, J.-a., et al. (2023). Natural language processing with machine learning methods to analyze unstructured patient-reported outcomes derived from electronic health records: A systematic review. In *Artificial intelligence in medicine*, Article 102701.

Singh, H., & Singh, A. (2023). ChatGPT: Systematic review, applications, and agenda for multidisciplinary research. *Journal of Chinese Economics and Business Studies, 21*(2), 193–212.

Sobhanmanesh, F., Beheshti, A., Nouri, N., Chapparo, N. M., Raj, S., & George, R. A. (2023). A cognitive model for technology adoption. *Algorithms, 16*(3), 155.

Solaiman, I. (2023). The gradient of generative AI release: Methods and considerations. In *Proceedings of the 2023 ACM conference on fairness, accountability, and transparency* (pp. 111–122).

Spanaki, K., Sivarajah, U., Fakhimi, M., Despoudi, S., & Irani, Z. (2022). Disruptive technologies in agricultural operations: A systematic review of AI-driven AgriTech research. *Annals of Operations Research, 308*(1–2), 491–524.

Ståhl, N., Falkman, G., Karlsson, A., Mathiason, G., & Bostrom, J. (2019). Deep reinforcement learning for multiparameter optimization in de novo drug design. *Journal of Chemical Information and Modeling, 59*(7), 3166–3176.

Stojanovski, T., et al. (2021). Rethinking computer-aided architectural design (CAAD)–From generative algorithms and architectural intelligence to environmental design and ambient intelligence. In *International conference on computer-aided architectural design futures* (pp. 62–83). Springer.

T. Susnjak, "ChatGPT: The end of online exam integrity?," *arXiv pre-print server,* 2022-12-19 2022, doi: None arxiv:2212.09292..

Tang, B., Ewalt, J., & Ng, H.-L. (2021). Generative AI models for drug discovery. In *Biophysical and computational tools in drug discovery* (pp. 221–243). Springer.

Tilton, Z., LaVelle, J. M., Ford, T., & Montenegro, M. (2023). Artificial intelligence and the future of evaluation education: Possibilities and prototypes. *New Directions for Evaluation, 2023*(178–179), 97–109.

Tung, L. (2023). *ChatGPT can write code. Now researchers say it's good at fixing bugs, too*. ZDNet.

Van Liebergen, B. (2017). Machine learning: A revolution in risk management and compliance? *Journal of Financial Transformation, 45*, 60–67.

Verma, S., Sharma, R., Deb, S., & Maitra, D. (2021). Artificial intelligence in marketing: Systematic review and future research direction. *International Journal of Information Management Data Insights, 1*(1), Article 100002. https://doi.org/10.1016/j.jjimei.2020.100002, 2021/04/01/.

Walczak, K., & Cellary, W. (2023). Challenges for higher education in the era of widespread access to Generative AI. *Economic and Business Review, 9*(2), 71–100.

Weininger, D. (1988). SMILES, a chemical language and information system. 1. Introduction to methodology and encoding rules. *Journal of Chemical Information and Computer Sciences, 28*(1), 31–36.

Weizenbaum, J. (1966). ELIZA—a computer program for the study of natural language communication between man and machine. *Communications of the ACM, 9*(1), 36–45.

Wrigley, P., Wood, P., Stewart, P., Hall, R., Robertson, D., & Ellis, K. (2019). Automated design techniques for new nuclear power plant design: Knowledge based engineering, generative design and optimisation. In *, Vol. 27. The proceedings of the international conference on nuclear engineering (ICONE) 2019* (p. 1314). The Japan Society of Mechanical Engineers.

Xames, M. D., & Shefa, J. (2023). *ChatGPT for research and publication: Opportunities and challenges. Available at: SSRN 4381803*.

Yang, Q., Liu, Y., Chen, T., & Tong, Y. (2019). Federated machine learning: Concept and applications. *ACM Transactions on Intelligent Systems and Technology (TIST), 10*(2), 1–19.

Yang, Z.-X., Wang, X.-B., & Wong, P. K. (2018). Single and simultaneous fault diagnosis with application to a multistage gearbox: A versatile dual-ELM network approach. *IEEE Transactions on Industrial Informatics, 14*(12), 5245–5255.

Yong-Hak, J. (2013). *Web of science*. Thomson Reuters.
Yue, M., Jong, M. S.-Y., & Dai, Y. (2022). Pedagogical design of K-12 artificial intelligence education: A systematic review. *Sustainability, 14*(23), Article 15620.
Zhang, Y., Jia, R., Pei, H., Wang, W., Li, B., & Song, D. (2020). The secret revealer: Generative model-inversion attacks against deep neural networks. In *Proceedings of the IEEE/CVF conference on computer vision and pattern recognition* (pp. 253–261).
Zhao, Z., & Ma, X. (2018). A compensation method of two-stage image generation for human-ai collaborated in-situ fashion design in augmented reality environment. In *2018 IEEE international conference on artificial intelligence and virtual reality (AIVR)* (pp. 76–83). IEEE.
Zhao, C., Yang, J., Xiong, W., & Li, J. (2021). Two generative design methods of hospital operating department layouts based on healthcare systematic layout planning and generative adversarial network. *Journal of Shanghai Jiaotong University, 26*, 103–115.