

# Research & Journal Report

## Topic: How Artificial Intelligence and Ultimate Graphic consume the natural resource

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### Research Overview

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### Relevant Articles (10)

Title	Abstract	Source	Limitations
Setting the Scene: How Artificial Intelligence is reshaping how we consume and deliver research	<jats:p>Since its release towards the end of 2022, ChatGPT has been dominating the majority of AI-related conversations on social media. One could almost say it has made AI more mainstream and accessible than ever. AI is quickly revolutionizing the modern-day research landscape. According to a CSIRO report, nearly 98% of scientific fields use AI in some way.</jats:p>	N/A	The article does not explore the potential ethical concerns and biases introduced by AI in research dissemination.
Setting the Scene: How Artificial Intelligence is reshaping how we consume and deliver research	<jats:p>Since its release towards the end of 2022, ChatGPT has been dominating the majority of AI-related conversations on social media. One could almost say it has made AI more mainstream and accessible than ever. AI is quickly revolutionizing the modern-day research landscape. According to a CSIRO report, nearly 98% of scientific fields use AI in some way.</jats:p>	N/A	The article does not explore the potential ethical concerns and biases introduced by AI in research dissemination.
Innovative Graphic Design: How to Combine Artificial Intelligence and Parametric Design	<jats:p>Innovative technologies are used to provide the latest approach to creating graphic design projects. The study aims to determine the impact of artificial intelligence (AI) and parametric design on innovative graphic design. The aim was achieved by employing SWOT analysis, Thurstone Scale, calculations of eligibility criterion, influence coefficient, and root mean square error (RMSE). The research established that creating a website requires taking into account important parameters of graphic design. The set parameters are color range ( $\Delta = 1.15$ ), geometric shapes ( $\Delta = 1.21$ ), and visual communications ( $\Delta = 0.90$ ). The aiDesigns.ai (2.5) and Adobe Sensei (2.23) may be the most effective AI applications for creating graphic design on a website. The applications have advantages because they facilitate the creation of individual design projects and are characterized by the possibility of using various innovative tools. The SWOT analysis established that the combination of AI and parametric design has a positive effect on the creation of graphic content for the website. The positive impact is associated primarily with the use of an automated approach (21%), and the creation of individualized content (22%). The practical significance of the research consists in choosing the most favorable AI technologies for creating graphic design for the website. Research prospects may be identifying approaches to creating graphic design for a website and developing visual learning material.</jats:p>	WSEAS TRANSACTIONS ON INFORMATION SCIENCE AND APPLICATIONS	The study may not account for the variability in AI tool performance across different design contexts and user expertise levels.
Web system with generative artificial intelligence for the creation of graphic organisers,	<title>Abstract</title> <p>The use of technological tools and artificial intelligence (AI) is transforming education. However, Ecuador faces barriers in the adoption of these technologies in secondary schools, due to a lack of preparation and smart tools to support teachers and students. To address this issue, EduGeniusAi was developed, a web-based system that automates the creation of graphic	N/A	The web system's effectiveness is limited by its current usability challenges and limited options

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personalised evaluations and recommendations of educational resources for digital teaching at secondary level	<p>organisers, personalised assessments and educational resource recommendations, optimising digital learning. The system incorporates the GPT-4 generative model, allowing teachers to generate quizzes and share teaching materials, while students have access to graphic organisers and content suggestions tailored to their needs. Usability was evaluated using the Post-Test Information and SUS Questionnaire techniques, obtaining an average score of 79.8%. The results reflect an improved user experience and greater efficiency in learning management. In conclusion, EduGeniusAi is a viable tool for high school education. However, areas for improvement were identified, such as optimising the performance of the system and expanding the options for graphic organisers. This work represents a significant advance in the application of AI in education, promoting more dynamic and inclusive learning, and laying the groundwork for future research in educational automation.&lt;/p&gt;</p>		for graphic organisers.
Is Artificial Intelligence the Ultimate Solution for Hydrological Modelling?	<p>&lt;jats:p&gt;Artificial intelligence plays an increasingly significant in many areas of our lives. Its applications in hydrology are becoming more common, and many authors have reported excellent results in modelling rainfall and predicting floods. However, alongside the successes, it is also important to understand the limitations of these models. This study presents various issues with potential significant impacts on applications, using an LSTM model and the CAMELS-US and CAMELS-GB datasets. The first important point is the problem of data quality. Hydrological observations are uncertain, with the largest error in observed discharge occurring with the highest measurements and the largest relative error with the smallest values. The error structure can change considerably due to alterations in riverbed geometry. Furthermore, areal rainfall is estimated based on point observations and is often biased, especially for extreme values (B&amp;#225;rdossy and Anwar 2023). Poor or variable quality of observational data can lead to suboptimal model outcomes. LSTM models act as bias correctors for many catchments by violating physical principles. For instance, water balances in catchments in the CAMELS-GB data are incorrect in more than 30% of the cases because evaporation is unrealistically high, which is compensated for by the LSTM models. The purpose of modelling is not to repeat what is already known but rather to predict behaviour under varying weather conditions or changing catchment characteristics. Thus, it is important to investigate how these models respond under altered conditions. An increase in precipitation results in inappropriate increases in evaporation in more than 60% of cases in the CAMELS-GB test series. Therefore, the use of these models for climate change studies is questionable. A major advantage of using LSTMs for hydrology is their ability to provide regional models for a large number of catchments. This is significantly different from the usual modelling for individual catchments. Several studies use static catchment attributes for regional modelling. However, integrating these static attributes changes the model structure. It is shown that a similar number of random numbers as attributes instead of catchment attributes can yield comparably good results. Therefore, the models may not be reliably applicable to uncalibrated catchments or changes within the catchments. A frequently discussed problem with the application of AI to hydrological prediction of extreme events is its tendency not to extrapolate beyond the range of its training data. However, this is only a limited issue due to regional modelling. By modelling specific discharges, insights from catchments where extreme floods have occurred can be transferred to other catchments. This allows for the simulation of scenarios exceeding the maximum values previously observed in a single catchment.&lt;/jats:p&gt;</p>	N/A	The study highlights the limitation of AI models in hydrology, particularly their dependency on data quality and inability to extrapolate beyond training data.
Revitalizing Turkish Mythological	<p>&lt;jats:p xml:lang="en"&gt;Artificial intelligence has become a new form of expression within our digitally evolving lives. By using illustrations to narrate stories visually, it's possible to visualize</p>	International Scientific and Vocational	The research may not fully address the

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Elements through Artificial Intelligence Applications in Graphic Design: A Case Study on Midjourney	<p>cultural values, traditions, and myths, making them more understandable. Fusing traditional storytelling techniques with the digital capabilities of new technologies like artificial intelligence is a powerful tool for revitalizing stories and traditional narratives, adding a new dimension to these tales and myths. Understanding how we can revive traditional narratives and myths is crucial in grasping their role in preserving cultural heritage and passing it down to future generations. Therefore, comprehending how artificial intelligence can be utilized in this field is essential. This study examines how traditions and myths can be revived through artificial intelligence, addressing fundamental concepts like AI and graphic design. To achieve this, some legendary characters from Turkish mythology were selected, and reconstructions of these characters were created in the Midjourney application, contrasting with previous illustration examples. This research article is believed to contribute to defining this contemporary technology in today's ever-changing world and tomorrow's design, where it redefines the design concept.&lt;/jats:p&gt;</p>	Studies Journal	cultural sensitivity required when using AI to depict traditional narratives.
Perancangan Storyboard Motion Graphic Kesiapan Kerja Pada Perkembangan Artificial Intelligence	<p>&lt;jats:p&gt;The development of AI has fundamentally transformed the professional ecosystem, creating a series of contemporary challenges for Generation Z preparing to enter the work arena. This study focuses on the development of motion graphic storyboards as an educational instrument to enhance Generation Z's employability capabilities for the AI era. Implementing a hybrid research methodology, data collection was conducted through digital surveys and in-depth dialog with experts to explore perceptions on the implications of AI on employment and the strategic competencies needed to adapt. The research findings indicate that Generation Z shows substantial awareness of the urgency of skills upgrading and transfer, although there is still a lack of clarity in understanding the concrete consequences of AI on future employment prospects. The motion graphic design developed presents an adaptive approach through an engaging storyline, narrative visualization, and interactive character elements, with an emphasis on the concepts of T-Shaped Skills and Transferable Skills.</p> <p>The research concludes that professional readiness in the era of AI digitalization requires not only technological understanding, but also adaptive flexibility, creativity, and synergy between human capacity and digital systems. Motion graphics were identified as the optimal medium to convey knowledge and strengthen Generation Z's position in anticipating future professional dynamics.&lt;/jats:p&gt;</p>	Pixel :Jurnal Ilmiah Komputer Grafis	The study might not fully capture the long-term impact of AI on employment dynamics, focusing instead on immediate educational strategies.
Graphic Improvements: Adding Explicit Syntactic Graphs to Neural Machine Translation	<p>&lt;jats:p&gt;Neural language models such as bidirectional encoder representations from transformers or generative pretrained transformer operate on the basis of sequences of words. Pretraining on a large corpus endows them with implicit knowledge about the relationship between words. This study explores the extent to which the explicit incorporation of knowledge about syntactic relations, represented as a graph of dependencies, can enhance machine translation (MT) tasks. Specifically, it employs the graph attention network (GAT), trained on a universal dependencies corpus, to evaluate the impact of explicit syntactic knowledge, even when derived from a smaller corpus, in comparison to the pretraining of implicit knowledge on a massive corpus. The investigation involves an experiment on integrating GAT models into the MT framework, demonstrating robust improvement in MT quality for three language pairs, thus opening up possibilities for neurosymbolic approaches to natural language processing.&lt;/jats:p&gt;</p>	Neurosymbolic Artificial Intelligence	The study does not address the scalability of incorporating explicit syntactic graphs in large-scale neural machine translation systems.
A Model for Understanding the Evolving Role of Graphic Designers in the Era of Artificial Intelligence	<p>&lt;jats:p&gt;This paper examines the possible impacts of artificial intelligence (AI) on the ever-changing role of graphic designers. As its main contribution, the paper proposes a model based on the intertwining concepts of deduction, induction, and abduction. It argues that deductive and inductive tasks in graphic design can be effectively and advantageously outsourced to AI, while abductive tasks are still best performed by human graphic</p>	N/A	The model may oversimplify the complex dynamics between AI and human creativity in graphic

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	<p>designers. Additionally, the power balance between humans and AI is discussed, concluding that human graphic designers must play a pivotal role in initiating and critically evaluating the results of any collaboration with AI tools. The model introduces the metaphorical notion of a "disciplinary expertise filter," which serves as a professional quality assurance for AI-based automation and augmentation in the design process. The distinction between "black box" and "clear box" AI systems is briefly discussed to provide a more nuanced understanding of AI as being "a magic tool" for graphic designers. Lastly, the paper presents six perspectives derived from the model, aiming to foster informed discussions and encourage critical reflections among graphic designers regarding their future role in the era of AI.&lt;/jats:p&gt;</p>		design.
Artificial Intelligence in Human Resources	<p>&lt;p&gt;Artificial Intelligence is rapidly revolutionizing so many industries at such an alarming rate that one such advanced AI robot, Sophia, joined the panel and was pitched questions during the United Nations's convention on sustainable development. Artificial intelligence is producing multiple solutions for hiring managers including basic recruiting tools, intermediate applications and advanced AI solutions. Together or independently, these tools are creating a more effective way for human resources to predict a candidate's future success with their company. artificial intelligence (AI) is transforming the human resources field altogether. The current study would throw some light on artificial intelligence breakthroughs and implications with respect to HR.&lt;/p&gt;</p>	N/A	The study may overlook potential biases and ethical issues arising from AI-driven decision-making in human resources.