



A Co-design Process with Artificial Intelligence: A Brief Discussion on the Use of AI in Creative Industries

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Received: July 25, 2023

Published: September 01, 2023

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Abstract

This editorial note discusses the potential for the use of artificial intelligence (AI) in creative industries. The integration of ChatGPT and Midjourney in 2022 has opened up new possibilities for co-design practices in the design and production process. The use of this technology requires the creative industry to transform its design process and innovative organizations to efficiently optimize their design and production process through AI and designer collaboration. There is a need for designers and AI developers to work together to experiment and learn from the results in order to effectively integrate AI into professional design practices.

Keywords: Co-Design; Artificial Intelligence; Midjourney; ChatGPT; Creative Industries

Introduction

The use of Artificial Intelligence (AI) in business has a long and rich history, dating back several decades. Initially, applications of AI in business were primarily focused on the field of data analytics. This technology has been used by businesses in a variety of industries, including marketing, finance, and healthcare [1,2]. In recent years, the use of AI in business has expanded to include more advanced applications, such as natural language processing and machine learning. A significant impact of AI in business has been on decision-making. AI systems can analyse vast amounts of data and identify patterns that humans may miss, enabling businesses to make more informed decisions and develop more effective strategies. As technology continues to advance, it is likely that the use of AI in business will become even more widespread and transformative.

The use of artificial intelligence in the co-design process

The use of AI in creative industries has recently gained attention with the launch of new technologies such as ChatGPT and Midjourney in 2022. This has led to a paradigm shift in the approach of organizations towards the design process [3]. The integration of these technologies in the design process can enable innovative organizations to optimize their design and production processes efficiently [3]. The potential use of AI in co-design and production has emerged as a promising avenue for innovation and efficiency in creative industries. Integrating designers' creativity and AI-

driven insights, such as ChatGPT and Midjourney, can revolutionize the design thinking process, resulting in more innovative and effective solutions [4]. Some examples can be found, Nguyen and Yuan [] have examined the potential of AI to facilitate creativity in design, including the use of generative design and machine learning algorithms to generate novel design solutions. Their results supported the use of human-AI collaboration, which could be understood as "augmenting human creativity". Similarly, Liu and Li (2021) have examined the use of AI to assist designers in generating innovative and effective design solutions. Their results show an improvement in design efficiency and a reduction in design costs. In general, the use of AI can automate routine tasks in the design thinking process [5], such as data entry and analysis, freeing designers to focus on more creative and strategic aspects of the design process.

For the entire idea development process, AI can analyse and process consumer behaviour and preferences data, enabling designers to create more targeted and effective designs. This new type of co-design can optimize the creative and production process in the design process, leading to more efficient and effective outcomes and products. The potential use of this co-design process in the creative industry is exemplified by the automotive industry's application of AI-driven insights in the design and production of more efficient and sustainable vehicles [6]. AI analyses data on vehicle performance, fuel efficiency, and emissions to optimize the design and production process, leading to more environmentally friendly and cost-effective vehicles.

Conclusion and Implications

Thus, the use of co-design with AI has enormous potential to transform various industries. By leveraging the strengths of both humans and machines, designers can create more innovative and effective designs, streamline the production process, and improve overall efficiency. However, the challenges associated with the integration of designers and machines should not be overlooked. It is essential to ensure that human creativity is not subsumed by AI-driven insights. All in all, despite the potential benefits of co-design with AI in the design process and production, there are still several challenges that need to be addressed. These challenges include designers' acceptance of AI-driven insights, maintaining originality in design, ensuring efficiency, and the need for designers to acquire new technological skill sets. While this editorial note does not provide empirical evidence for the actual implementation of this co-design process, the discussion and concepts of various concerns are crucial for initiating further research in this area.

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