THE ARTISTIC POTENTIAL UNLEASHED BY ARTIFICIAL INTELLIGENCE

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Abstract: Emerging technologies, particularly in the realm of artificial intelligence, are revolutionizing the landscape of creativity. AI-powered programs are making significant contributions across diverse fields such as architecture, music, visual arts, and science. The recent auction of the Portrait of Edmond at Christie's has challenged conventional perceptions of AI art, prompting inquiries into the nature of creativity in this domain. This research paper addresses the persistent question: "Can AI art be deemed genuinely creative?" To address this query, the study examines various applications of AI, different perspectives on AI art, and the processes involved in generating AI-based artworks. Through a comprehensive analysis, the paper argues that AI possesses the capacity to achieve artistic creativity.

Keywords: AI generated art; computational creativity; machine learning; artificial intelligence

Introduction

The popularity of artificial intelligence in artistic creation has brought attention to this emerging art genre. However, the credibility of this genre and its creative aspects remain elusive concepts that warrant extensive academic and practical exploration. The AI Portrait of Edmond de Belamy, which garnered controversy in 2018 due to debates over whether it was generated by a machine or replicated human creativity, further accentuated the need for investigation. Ethical concerns also arose in relation to this artwork. As the conventional understanding of art revolves around communication between individuals, a new examination of AI art necessitates additional approaches beyond traditional art historical perspectives. Therefore, the objective of this paper is to

establish a framework for categorizing AI art. With this objective in mind, the study investigates whether machines can engage in creative processes, demonstrate artistic abilities, and determine if these abstracted processes possess inherent creativity. Furthermore, even if a creative process exists, the paper explores whether its outcomes can be considered artistic and how they relate to human-centered creativity.

Articulation and Originality

This research paper aims to address the questions of authorship and originality raised by the portrait. Specifically, it explores the following inquiries: To what extent can an artist lay claim to AI-generated art as their own? How does knowledge of an artist's identity, whether human or AI, influence the perception of AI's ability to create original artworks? How does knowledge of an artist's identity, whether human or AI, impact the evaluation of the artwork?

The Schema Theory

This theory provides a valuable empirical framework for understanding how audiences perceive art based on the artist's identity. According to Hong and Curran, a schema refers to an active data structure that organizes memory and influences perception, performance, and thought [1]. In the context of art, schema would encompass various factors such as understanding the concepts behind the artwork, audience perceptions of its creativity, personal interest in specific artworks, and the specific aspects through which the works are evaluated.

Furthermore, individuals possess schemata that incorporate assumptions regarding AI and its impact on creativity in specific artworks. Since art encompasses diverse concepts, the application of schema theory proves relevant in studying artworks. Research has indicated that visuals effectively activate schema, making the theory credible in understanding how AI-related stereotypes influence the audience's perception of AI's creative output. McCarthy emphasizes that some individuals question AI's ability to perform like humans, even when AI's performance objectively matches or exceeds human capabilities [2]. Alternatively, even if AI-generated works bear similarities to those

created by humans, people still maintain the belief that AI is incapable of producing authentic art, as they inherently associate art with human observations and efforts. In light of these considerations, this research paper examines different perceptions of paintings created by artists with different identities. When a painting is generated by distinct entities, the assessment of each work varies primarily based on objective differences in composition, structure, and the audience's artistic bias. Other studies on art reveal negative stereotypes associated with AI-generated paintings [3]. This paper argues that individuals tend to give lower ratings to paintings created by artificial intelligence. Thus, based on Schema theory, it proposes that paintings produced by artists identified as AI, at present, receive lower evaluations of their artistic value compared to paintings created by artists identified as human.

Conclusions

Despite criticism surrounding the creativity of AI art, this research has established that AI art possesses artistic creativity. This paper contends that individuals who embrace AI art are on the right path as they have the opportunity to explore new AI technologies, uncover the potential of computational abstraction processes in re-embodied human artistic expression, and contribute to the emergence of novel art forms. As highlighted by Cetinic and the author in their study on the artistic application of AI, our current understanding and interpretation of AI systems remain limited, and researchers from various disciplines are actively contributing to the autonomy of AI. With advancing technology, the line between perceiving AI as mere tools and as genuine artists/creators is becoming increasingly blurred [1]. Consequently, this study proposes that AI systems have the potential to evolve into "real artists." For artists who view AI as "artistic collaborators," this paper suggests the exploration of alternative approaches to "control" the parameters within which AI programs generate their outputs, rather than solely focusing on the mechanical augmentation of algorithms.

References

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