

PROSPECTS FOR THE IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE IN VISUAL ARTS

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Abstract: this article is devoted to the study of the impact of artificial intelligence technologies on contemporary visual art. The key developments in the field of generative neural networks, such as GAN, DALL-E, and Midjourney, are discussed, along with the philosophical and aesthetic aspects of human-machine interaction in the process of artistic creation. Special attention is given to issues of authorship, the legal status of AI-generated works, and the potential for creating personalized art based on biometric and behavioral data.

Keywords: artificial intelligence, visual art, algorithmic creativity.

ПЕРСПЕКТИВЫ ВНЕДРЕНИЕ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В ИЗОБРАЗИТЕЛЬНОМ ИСКУССТВЕ

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Аннотация: настоящая статья посвящена исследованию влияния технологий искусственного интеллекта на современное изобразительное искусство. Рассматриваются ключевые разработки в области генеративных нейросетей, таких как GAN, DALL-E и Midjourney, а также философские и эстетические аспекты взаимодействия человека и машины в процессе художественного творчества. Отдельное внимание уделено вопросам авторства, правового статуса произведений ИИ и возможностям создания персонализированного искусства на основе биометрических и поведенческих данных.

Ключевые слова: искусственный интеллект, изобразительное искусство, алгоритмическое творчество.

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In recent years, the rapid development of artificial intelligence (AI) technologies has influenced various areas of human activity, including visual art. The application of generative neural networks, such as GAN (Generative Adversarial Networks), VQ-GAN, as well as modern visual generation tools like DALL-E, Midjourney, and Stable Diffusion, has become particularly significant. These technologies not only automate the image creation process but also transform the very understanding of authorship and the artistic act. This article is dedicated to examining the current state, challenges, and future prospects of AI in the context of visual art.

Every year, the number of interdisciplinary studies at the intersection of AI and visual creativity continues to grow. These studies cover a wide range of topics — from theoretical issues of aesthetics and philosophy to specific examples of interaction between the artist and algorithm in the creative process. The scientific community is increasingly exploring the extent to which AI can be recognized as a participant in the artistic process and where the boundaries between machine generation and human intent lie.

A notable example in this context is the CAN (Creative Adversarial Network) model developed by Elgammal and colleagues [1]. This system did not simply learn from existing styles but intentionally deviated from them, offering original visual forms that had not been seen before. This demonstrated the potential for AI to be not only an imitator but also a potential innovator. Another significant contribution is the CycleGAN model by Zhu et al. [2], which learned to stylistically transform images between two domains without the need for paired data. This allows for deep visual transformations beyond the usual filter or processing.

The problem of creativity and authenticity in AI remains an active topic of discussion. In the works of Hertzman [3], as well as Mazzone and Elgammal [4], a philosophical understanding of the machine's creative act is proposed. Researchers raise the question: can a work created without intent, without internal motivation, be considered art in the full sense of the word? After all, artistic expression traditionally involves subjectivity,

contextuality, and the emotional engagement of the author — qualities that AI, in its usual understanding, does not possess.

However, individual examples demonstrate the opposite. For instance, the portrait "Edmond de Belamy," created by the Parisian collective Obvious using a GAN algorithm, was sold at a Christie's auction for a significant amount — \$432,500. This case sparked heated debates in the artistic and legal communities: who is the author — the developer, the algorithm, the training dataset, or the curator of the final image? Such precedents highlight the urgent need to reconsider legal and ethical frameworks in the field of digital art.

This study employed comparative, analytical, and contextual methods. The main focus was on reviewing various theoretical positions, analyzing artistic cases, and the influence of AI on professional practices in visual art. Of particular interest are examples involving tools like Midjourney, DALL·E, and projects like Obvious, where algorithms become full-fledged co-authors of visual expression.

Modern AI systems do not simply replicate style or copy visual language — they can be active agents in artistic exploration. With their help, artists can go beyond traditional means of expression, experimenting with form, scale, and meaning. GAN technology remains particularly in demand, allowing the synthesis of new visual forms with a high degree of originality.

One of the key issues is authorship and the aesthetic evaluation of AI-generated works. Since such works do not have a specific human subject, legal uncertainty arises: who owns the rights to an image created by a machine? Moreover, as noted by Hong, Yoon, and Park [5], AI creations lack human life experience, intuition, and empathy — components without which full-fledged art is difficult. This leads to new approaches to evaluating aesthetic value, where not only form but also the generation process, the degree of human involvement, and the semantic load are important.

The generation of AI images is based on processing textual or visual prompts provided by the user. The quality and artistic level of the final product largely depend on the accuracy, richness, and creativity of the initial material. In this sense, the interaction between humans and AI takes on the nature of co-authorship, where the human sets the direction, and the machine implements multiple variations based on it. The concept of "interactive creativity," in which the user does not just input a request but dynamically adjusts the generation process in dialogue with the algorithm, is becoming more frequently discussed.

In this regard, the concept of personalized art deserves special attention — a direction based on deeply individualized creative outcomes. AI systems can take into account biometric, behavioral, and cognitive data of the user: from emotional state and heart rate to visual preferences and facial expressions. Using such information, visual images are created that most accurately reflect the inner world of the person, their current moods, and psychological characteristics. This allows for the transition from mass art to deeply intimate art, where each piece is a unique reflection of a specific individual.

Thus, artificial intelligence not only changes the technical aspects of artistic production but also causes fundamental transformations in the understanding of art itself. It calls into question traditional categories: genius, inspiration, originality, authorship. Today, AI is becoming not just a tool but a partner in the creative process, expanding the boundaries of what is possible in the visual culture of the 21st century.

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