



The Role of Artificial Intelligence in the Creation of Modern Art

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Abstract

Artificial intelligence is becoming an increasingly significant tool in modern artistic practice, influencing how artists generate ideas, create images, manipulate media, experiment with styles, and interact with audiences. Generative artificial intelligence systems can produce visual, textual, auditory, and multimedia outputs from human instructions and data, creating new possibilities for artistic experimentation. This paper examines the role of artificial intelligence in the creation of modern art, focusing on generative processes, human-machine collaboration, creative experimentation, personalization, digital workflows, audience participation, authorship, copyright, ethical concerns, and future directions. AI can accelerate the production of visual variations and enable artists to explore combinations that may be difficult to produce manually. It can also become a conceptual subject through which artists investigate automation, identity, technology, surveillance, and machine creativity. However, AI-generated art raises important questions about originality, authorship, attribution, training data, copyright, bias, labour, and the distinction between artistic intention and automated generation. The paper argues that AI should not be viewed simply as a replacement for human creativity. In many artistic contexts, it functions as a tool or collaborator whose outputs are selected, modified, contextualized, and interpreted by humans. The significance of AI in modern art therefore depends on the relationship between technological systems, human intention, cultural context, and audience interpretation.

Keywords

Artificial Intelligence; Modern Art; AI Art; Generative Art; Machine Creativity; Human-AI Collaboration; Digital Art; Authorship; Copyright

Introduction

Technological innovation has repeatedly influenced the development of artistic practice. Photography, film, computers, digital imaging, and the internet each changed how artists produced and experienced art. Artificial intelligence represents a further stage in this technological transformation because some AI systems can generate new visual, textual, musical, and audiovisual content.



Generative AI tools allow artists to explore ideas through natural-language prompts, reference images, editing instructions, or combinations of different inputs. The resulting outputs can be used as starting points, materials, studies, or finished works depending on the artist's approach.

The use of AI also challenges conventional assumptions about creativity. If a machine generates an image, questions arise concerning who should be regarded as the creator and what role human intention plays in the artistic process.

The cultural significance of AI-generated art extends beyond technical novelty. Artists use AI to explore contemporary questions about automation, identity, data, labour, human-machine relationships, and technological power.

This paper examines the role of artificial intelligence in modern art through nine dimensions: generative production, human-AI collaboration, experimentation, personalization, digital workflows, audience experience, authorship, ethical challenges, and future development.

1. Artificial Intelligence and the Evolution of Modern Art

AI art can be understood as part of a longer history of artists experimenting with technology. Earlier forms of computer-generated and algorithmic art already explored the possibility of using computational systems as creative tools.

Contemporary AI systems expand these possibilities by working with large datasets and sophisticated generative models capable of producing complex images, text, sound, and other media. The development of AI therefore continues the tradition of technological experimentation while introducing new questions about machine-generated content and creative agency.

2. Generative AI as an Artistic Tool

Generative AI can produce multiple visual or conceptual possibilities from relatively simple instructions. Artists may use these systems to develop compositions, explore visual styles, create references, or generate unexpected combinations. The speed of generation can support rapid experimentation. Instead of spending hours producing every variation manually, an artist can evaluate numerous possibilities and then refine selected results. The artistic value of the process depends on how the artist frames, selects, edits, and contextualizes the generated material.

3. Human-AI Collaboration and Creative Agency

In many cases, AI does not operate independently of human creativity. Artists decide what to ask the system, which outputs to select, how to modify them, and how to present the final work. This creates a collaborative model in which human intention and computational generation interact. The artist may act as director, editor, curator, designer,

or conceptual author. Such collaboration challenges traditional distinctions between tool and collaborator but does not eliminate the importance of human judgement, interpretation, and artistic purpose.

4. AI and Artistic Experimentation

AI can encourage experimentation by generating unusual combinations, variations, and visual possibilities. Artists can use these outputs to explore forms that may not emerge from familiar techniques. Unexpected results can become part of the creative process, particularly when artists treat errors or unusual outputs as opportunities for further development. AI therefore has potential as an exploratory environment, although effective artistic use still requires critical selection and conceptual direction.

5. AI in Digital Workflows and New Artistic Forms

AI can be integrated into broader digital workflows involving photography, video, animation, 3D modelling, graphic design, sound, and interactive media. Artists may combine generated elements with manually created materials. This integration can produce hybrid artworks that blur distinctions between traditional and digital production. AI can also support interactive and adaptive artworks that respond to user input or changing data. As tools develop, artistic workflows may increasingly involve multiple forms of automation rather than a single AI system.

6. AI, Audience Experience, and Interpretation

AI-generated art can influence how audiences understand creativity and authenticity. Viewers may respond differently when they know that an artwork was produced partly or largely through an automated system. The question of process can become part of the artwork itself. Artists may deliberately disclose their use of AI or use the technology as a subject of critical reflection. Audience interpretation is therefore shaped not only by visual qualities but also by knowledge of the technologies and decisions involved in production.

7. Authorship, Originality, and Copyright

AI-generated art raises difficult questions about authorship and ownership. If a system produces an image from a prompt, the roles of the user, model developer, training-data creators, and other contributors may be difficult to separate. Copyright rules vary across jurisdictions and continue to develop in response to generative technologies. Questions concerning training data, derivative works, attribution, and ownership remain subjects of legal and policy debate. Artists using AI should therefore pay attention to licensing terms, provenance, disclosure, and applicable intellectual-property rules.

8. Ethical Issues and Responsible AI Art

Ethical concerns include biased training data, unauthorized use of creative works, cultural stereotyping, labour displacement, privacy, and the environmental cost of computational

systems.

Responsible AI art practice requires awareness of how systems are trained and how generated outputs may reproduce social biases. Artists and institutions can improve transparency by documenting processes and acknowledging relevant sources and collaborators. Ethical use also involves respecting cultural communities and avoiding representations that exploit or mischaracterize people or traditions.

9. Future Directions of AI in Modern Art

AI is likely to become increasingly integrated into modern artistic practice as generative systems become more capable and accessible. Future applications may involve real-time interactive art, personalized exhibitions, immersive environments, robotics, and multimodal creative systems. The future role of AI will depend on how artists, cultural institutions, legal systems, and audiences negotiate questions of authorship, access, ethics, and creative labour. Further research should examine whether AI expands creative diversity, how artists experience human-machine collaboration, and how cultural institutions can preserve and interpret AI-dependent artworks.

Conceptual Framework

The following framework presents a simplified relationship between artificial intelligence, generative artistic processes, and emerging artistic forms. Human creativity, algorithms, training data, authorship, copyright, and audience interpretation can influence how AI contributes to modern art.

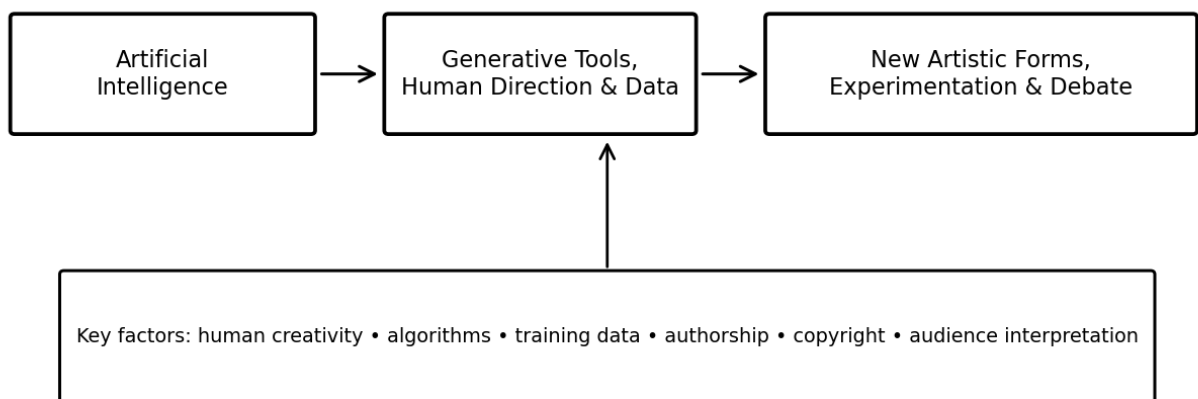


Figure 1. Conceptual framework showing the role of artificial intelligence in the creation of modern art.

Conclusion

Artificial intelligence is becoming an important component of modern artistic practice by expanding the tools available for experimentation, generation, editing, and interaction. Its influence is particularly visible in generative art, digital workflows, interactive media, and new forms of human-machine collaboration.

AI does not necessarily replace human creativity. In many artistic practices, human intention remains central because artists select, modify, interpret, contextualize, and present generated material. At the same time, AI challenges traditional concepts of authorship and originality and raises significant questions concerning copyright, training data, bias, labour, and cultural representation.

The future of AI and modern art will depend on responsible integration rather than technological adoption alone. Transparent practices, respect for creative rights, critical engagement with datasets, and continued recognition of human artistic judgement can help ensure that AI expands creative possibilities while maintaining ethical and cultural responsibility.

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