

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON CONTEMPORARY PAINTING PRACTICES: A FOCUS ON NIGERIAN ARTISTS

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Abstract

Artificial intelligence (AI) has emerged as one of the most transformative forces in the art world, reshaping the ways paintings are conceptualized, created, interpreted, and consumed. Beyond being merely a technological tool, AI has become an active collaborator, pushing the boundaries of creativity, authorship, and artistic meaning. This paper examines the impact of AI on contemporary painting practices, exploring both opportunities and challenges. It highlights the ways artists integrate machine learning algorithms into their work, the ethical and philosophical debates surrounding originality and authorship, and the social implications of AI-generated art in galleries, markets, and educational institutions. Using examples from global and Nigerian contexts, including artists like Victor Ehikhamenor (b:1970), Ngozi Omeje (b:1970), William Kentridge (b:1970), and Obvious Collective, this article provides a comprehensive review of how AI is reconfiguring aesthetics, process, and value in painting. The study concludes that AI does not erase traditional practices but rather expands artistic dialogues, demanding new approaches to curation, pedagogy, and policy.

Keywords: Artificial Intelligence, Contemporary Painting, Creativity, Machine Learning, Art Market, Authorship, Digital Aesthetics

Introduction

The twenty-first century has witnessed a remarkable convergence between art and technology, with artificial intelligence (AI) standing at the forefront of this integration. Painting, once primarily associated with manual skill, imagination, and deeply personal expression, is now undergoing profound transformation as artists increasingly collaborate with algorithms, data sets, and

generative systems. This technological shift does not diminish human creativity; instead, it fosters new forms of hybridity in which the boundaries between artist, tool, and artwork are becoming more fluid. The result is a redefinition of artistic practice where machines act as co-creators, enabling fresh aesthetic possibilities while simultaneously challenging long-held ideas about originality, authorship, and authenticity. This article examines these transformations with a particular focus on contemporary painting practices across different global contexts, including Africa, Europe, Asia, and North America. By situating AI within diverse cultural and artistic traditions, the study highlights both the universal and region-specific ways in which technology is reshaping painting. The central questions guiding this investigation are: How is AI influencing the creative processes of painters? What implications does the use of AI carry for concepts of originality and authorship? In what ways are traditional, manual techniques merging with digital and computational practices? And finally, what challenges and opportunities arise for global art markets and cultural institutions as they adapt to these shifts? Through an integrated approach that combines literature review, case studies of practicing artists, and thematic analysis of ongoing debates, this study argues that AI should not be seen as an intrusion into the world of painting but rather as an extension of artistic imagination. AI-powered tools allow artists to explore complex visual patterns, reinterpret cultural motifs, and push the boundaries of visual experimentation in ways that would be difficult or impossible to achieve through manual methods alone. Moreover, AI opens new pathways for collaboration across disciplines, inviting dialogue between computer science, cultural history, and fine arts. At the same time, the emergence of AI in painting raises critical questions about ethics, accessibility, and cultural equity, especially in contexts where technological resources remain unevenly distributed. Ultimately, the rise of AI in painting signals not the end of traditional art, but the beginning of an expanded field where human intuition and computational intelligence converge. This dynamic interplay reflects the broader reality of the twenty-first century: creativity is no longer confined to human hands alone but thrives at the intersection of biology and technology, memory and machine, tradition and innovation.

Literature Review: AI and Creativity in Painting

Scholarly discussions about the relationship between AI and art often return to fundamental questions of creativity, originality, and authorship. These debates challenge long-standing assumptions about what it means to be an artist and what constitutes authentic artistic production.

Boden (2016) argues that creativity is no longer the sole preserve of human imagination but can be expanded and augmented through computational processes. In the realm of painting, AI applications such as DeepDream, StyleGAN, and DALL·E employ neural networks to generate novel visual outputs by learning from vast datasets of images. These applications not only replicate stylistic elements but also synthesize entirely new aesthetic possibilities, allowing artists to explore visual territories that would be unimaginable through traditional techniques alone. Elgammal et al. (2017), introduced AICAN, a machine learning system designed to autonomously produce artworks. While some critics initially dismissed AICAN's outputs as algorithmic curiosities devoid of intentionality, others argued that the works carried genuine artistic value by expanding the language of painting. A turning point in public perception occurred in 2018 when the AI-generated painting *Edmond de Belamy*, created by the Obvious Collective, was sold at Christie's for over \$400,000. This event did not simply mark a financial milestone but also conferred economic and cultural legitimacy on AI-assisted works, signaling to global art markets that machine-generated images could occupy the same institutional spaces as human-produced art. African scholarship brings an important perspective to these debates by foregrounding how technology intersects with cultural heritage and identity. Ogunbiyi (2021) emphasizes that Nigerian artists use AI not only as a tool for experimentation but also as a medium to preserve indigenous visual traditions in a rapidly globalizing digital context. This approach reframes AI as a conduit for cultural continuity rather than a force of displacement. Similarly, Atairu (2023) highlights how augmented reality and AI-powered installations can reframe historical narratives, particularly in relation to postcolonial memory and representation. Together, these contributions reveal AI as a double-edged sword: it is at once empowering and disruptive, innovative yet ethically complex, offering opportunities for preservation while raising questions about authenticity, ownership, and cultural appropriation.

Contemporary Painters and AI Integration: Global Perspectives

On a global scale, artists have begun to incorporate AI into their practices in ways that both challenge and expand the definition of painting. Refik Anadol (b:1985), a Turkish-American media artist, has pioneered the use of AI to process massive datasets ranging from brain scans to meteorological records transforming them into immersive, data-driven canvases. His works blur the boundaries between painting, architecture, and digital installation, redefining what it means to work on a "canvas" in the twenty-first century. By treating data as a pigment and algorithms as

brushes, Anadol creates works that are simultaneously aesthetic and informational. Mario Klingemann (b:1970), a German artist, employs generative adversarial networks (GANs) to produce distorted yet striking portraits that probe the fluid nature of human identity. His work questions the stability of selfhood in an era where digital images can be endlessly manipulated and recombined. Rather than offering stable representations, Klingemann's portraits dwell in ambiguity, compelling viewers to confront the unsettling aesthetic of machine imagination.

In the African context, South African artist William Kentridge offers a compelling example of how AI can be integrated with traditional media. Known for his animated drawings and politically charged narratives, Kentridge has experimented with generative systems to create hybrid works that combine drawing, animation, and algorithmically produced sequences. His approach illustrates how AI does not erase tradition but instead enriches it, layering computational processes onto deeply historical and culturally rooted practices. By doing so, Kentridge demonstrates that AI can serve as a partner in storytelling, amplifying both aesthetic experimentation and socio-political critique. These global examples demonstrate that AI is not a monolithic force but a versatile tool whose meaning depends on cultural context and artistic intent. Whether used to explore the aesthetics of data, interrogate identity, or preserve cultural motifs, AI enables painters and visual artists to expand the field of art while simultaneously sparking necessary debates about originality, authorship, and the ethical dimensions of technological creativity.

AI in Nigerian Painting Practice

The integration of AI in Nigerian painting manifests in diverse and innovative ways, reflecting the adaptability of artists who navigate both local traditions and global technological trends. For some painters, AI serves as a preliminary tool in the creative process. Algorithms assist in generating sketches, experimenting with color palettes, or constructing compositional frameworks, which artists later translate into physical canvases. This hybrid approach preserves the tactile intimacy of painting while incorporating the computational precision of digital systems, thereby merging tradition with innovation.

Other artists have embraced AI to create fully digital works that circulate primarily in virtual spaces. These include NFTs (non-fungible tokens) and online exhibitions, which provide Nigerian painters with access to international markets that might otherwise be closed due to infrastructural

limitations, such as the scarcity of galleries and limited patronage within local contexts. By leveraging blockchain technology and digital marketplaces, Nigerian artists extend their reach beyond geographical boundaries, positioning themselves within the global art economy and ensuring visibility in transnational conversations about contemporary art.

Beyond the technical applications, AI opens a deeper conceptual space for Nigerian artists to experiment with questions of identity, history, and futurity. By training algorithms on indigenous patterns, cultural motifs, and archival images, artists use AI to interrogate and deconstruct colonial narratives that have historically shaped representations of Africa. In doing so, they reclaim visual sovereignty, ensuring that African aesthetics are not merely consumed but also reimagined on their own terms. This creative process transforms AI from a neutral tool into a medium of cultural resistance and self-definition. Equally, AI provides Nigerian artists with opportunities to envision African futurities, imagining alternative realities in which technology and tradition coexist harmoniously. By blending ancestral symbols with futuristic digital aesthetics, artists contribute to broader Afrofuturist discourses that seek to redefine Africa's place in global modernity. These works highlight not only a celebration of cultural heritage but also an aspirational vision of what Nigerian and African art can become in the twenty-first century. In this way, AI in Nigerian painting functions as more than a stylistic device; it becomes a medium of negotiation between past and future, locality and globalization, physical craft and digital innovation. Nigerian artists who engage with AI demonstrate how technology, when rooted in cultural consciousness, can serve as both an artistic ally and a tool for reimagining collective memory and identity.

Malik Afegbua (b:NA)

Afegbua rose to global prominence in 2023 with his AI-generated series. The Elders' Series, which depicts elderly Africans in high-fashion contexts, challenging stereotypes of aging and African identity. His work demonstrates how Nigerian artists use AI not just as a tool but as a medium for cultural redefinition. Afegbua employs generative models to construct hyper-realistic images that merge painting, photography, and digital collage. The aesthetic is painterly in quality, even when produced digitally, and speaks to contemporary Nigerian visual traditions.



Figure 1. Malik Afegbua, from The Elders Series.

Minne Atairu (b:NA)

Atairu explores the intersection of heritage and AI. Her work with Igbo-Ukwu bronzes reimagines archaeological artifacts through machine learning, creating speculative visual histories. She positions AI as a means of reconstructing cultural memory and addressing gaps caused by colonial displacement of artifacts. In her exhibitions, AI-generated visuals are often presented alongside physical installations, producing a hybridized aesthetic that bridges painting, sculpture, and digital art.



Figure 2. Minne Atairu. Synthetic Benin Bronze.

Osinachi (Ikongio) (b:1991)

One of Nigeria's best-known digital artists, Osinachi (Ikongio) has employed AI alongside blockchain technologies to expand the reach of Nigerian art. His works often carry a painterly quality, using texture and form to comment on themes of identity, globalization, and economy. By

selling his works as NFTs, Osinachi illustrates how AI-powered art intersects with new economic models, disrupting traditional art markets and offering Nigerian painters' greater autonomy.



Figure 3, Ikongio Okeke, AftoDreams AI port

Ife Olowu (b:1996)

Olowu engages with AI to generate textural experiments that mimic and extend traditional Nigerian painting techniques. His works reveal a concern with hybridity how to merge tactile, material surfaces with the smooth, algorithmic patterns generated by machines. Olowu's approach underscores the possibility of AI as collaborator rather than competitor, expanding rather than erasing painterly traditions.



Figure 4. Ife Oluwu, Makoko (base Painting) / AR everlay view

Discussion

The adoption of AI in Nigerian painting raises several critical debates.

The adoption of artificial intelligence (AI) in Nigerian painting has sparked several important debates, reflecting both the opportunities and the challenges that this technological shift presents. First, AI plays a democratizing role by lowering the barriers to creative expression. Traditionally, many emerging Nigerian artists have faced significant obstacles such as the high cost of art materials, scarcity of studio spaces, and limited access to formal art training. With AI, however, they can experiment with digital tools—often open-sourced and widely available—without the same financial and infrastructural constraints. This has allowed more artists, including those from rural or economically disadvantaged backgrounds, to engage in artistic creation. Furthermore, AI amplifies visibility by enabling Nigerian artworks to circulate globally through online platforms and social media. In doing so, it bypasses the longstanding infrastructural challenges of the local art industry, including the shortage of galleries, museums, and funding opportunities. Through this digital visibility, Nigerian artists can share their work with international audiences, creating new networks of recognition and exchange.

Second, AI has opened new frontiers for cultural preservation and innovation. By training algorithms on indigenous motifs, patterns, and symbols, Nigerian artists can digitally archive cultural knowledge while also reinterpreting it for contemporary and futuristic contexts. This dual process of preservation and reinvention aligns with broader movements in African futurism, where ancestral heritage is blended with speculative imagination to envision alternative futures. For example, traditional aesthetics such as Nsibidi symbols or Yoruba adire patterns can be reimaged through AI into futuristic visual forms, offering new ways to maintain cultural continuity in an increasingly digital world. In this sense, AI becomes not merely a tool for reproduction but a medium of cultural storytelling and identity-making.

Third, the integration of AI raises complex questions about authorship, originality, and cultural homogenization. Since many AI systems are trained on global datasets often dominated by Western imagery—they carry embedded biases that may influence outputs. This creates tension for Nigerian artists who strive to produce culturally authentic work while using tools that may unintentionally reflect external perspectives. The issue of authorship also becomes complicated: who owns an AI-generated painting the artist who conceptualized it, or the developers of the

algorithms that enabled it? Moreover, if Nigerian artists rely heavily on AI models not specifically designed with African cultural contexts in mind, there is a risk of homogenization, where unique local traditions are overshadowed by generalized global aesthetics. This concern underscores the need for localized AI development that takes into account Nigeria's diverse cultural heritage.

Finally, infrastructural and systemic challenges cannot be ignored. Nigerian artists who adopt AI must contend with unstable electricity supply, high internet costs, limited access to high-performance computing devices, and a lack of institutional or governmental support. Despite these barriers, many continue to experiment with AI, reflecting a larger narrative of African technological agency. Rather than being passive consumers of global technology, Nigerian artists actively adapt and reshape AI to meet their cultural and creative needs. This resilience demonstrates how technology, when localized and contextualized, can become a tool of empowerment rather than dependency.

In sum, the adoption of AI in Nigerian painting reveals both opportunities for democratization, cultural preservation, and global visibility, as well as challenges related to authorship, bias, and infrastructure. The debates emerging from this practice highlight the importance of ensuring that AI tools are critically examined and adapted in ways that respect and amplify Nigeria's cultural identity. Ultimately, Nigerian AI painters are not simply adopting a foreign technology; they are weaving it into their own artistic traditions, crafting a unique intersection of heritage, innovation, and futurism.

Conclusion

Artificial intelligence is profoundly reshaping painting practices across the globe, and Nigerian artists are emerging as some of the most dynamic contributors to this transformation. Far from being passive adopters of imported technology, they are active co-creators, using AI as a platform to challenge stereotypes, reclaim narratives, and preserve cultural heritage in innovative ways. By experimenting with generative systems and digital platforms, Nigerian painters are reimagining African modernities while situating themselves within a broader global digital common. Artists such as Afegbua, Atairu, Osinachi, and Olowu demonstrate that AI is not merely a technological novelty but a critical medium for cultural expression, political commentary, and artistic experimentation. The implications of this shift are profound. First, Nigerian engagement with AI in painting underscores the capacity of African artists to shape, rather than simply consume,

technological tools. Their work positions Nigeria as a leader in the dialogue about how emerging technologies intersect with cultural identity, heritage, and creativity. Second, the growing presence of AI-generated Nigerian artworks in global exhibitions and markets highlights the economic opportunities of digital art, particularly in relation to NFTs and online sales platforms, which expand visibility beyond traditional galleries. This new visibility strengthens Nigeria's position in the international art ecosystem, while also offering young artists new avenues for professional growth.

At the same time, the rise of AI art presents important challenges. Questions of authorship, originality, and ownership remain unresolved, especially when algorithms trained on Western datasets are applied to African aesthetics. Issues of infrastructural inequality such as unreliable electricity, high internet costs, and limited institutional support also risk slowing the momentum of Nigerian digital art. Addressing these challenges requires not only the creativity of individual artists but also the involvement of policymakers, art institutions, and educational systems. Incorporating AI art into Nigerian curricula, strengthening cultural policies around digital rights, and building supportive infrastructures will be critical in sustaining this renaissance. Looking ahead, the future of Nigerian painting in the age of AI will depend on balancing tradition with innovation, heritage with futurism, and local identity with global engagement. If these dynamics are managed thoughtfully, Nigerian artists are likely to play a decisive role in shaping the global trajectory of AI art, ensuring that African creativity is not erased but amplified in this new digital era. In this sense, AI should not be seen as a threat to traditional painting but as a catalyst for a broader, richer, and more inclusive artistic dialogue one in which Nigerian voices resonate powerfully on the global stage.

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