Towards artist-centered Artificial Intelligence

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Context

Artificial intelligence (AI) technologies have become increasingly prominent in the creative and cultural sectors, particularly with the advent of generative AI models capable of producing textual, auditory, and visual content with a high degree of fidelity. However, their integration has not been universally embraced by artistic and creative communities. Significant concerns have emerged, including the unauthorized use of copyrighted materials for model training, the opacity of generative systems that limits artists' ability to adapt these tools to their needs, and the escalating environmental impact of AI technologies. These challenges have contributed to a partial rejection of such tools in certain sectors, highlighting the need for alternative technological approaches. Yet, what form might these alternatives take?

An increasing body of research explores the application of artificial intelligence (AI) in the arts. However, the tensions between artistic practice and parallel technological advancements remain underexamined. A deeper understanding of these frictions could lay the foundations of the development of artist-centered AI technologies, characterized by alternative evaluation methods beyond fidelity, efficiency, and speed, creative explanation methods to enhance interpretability, experiential over technical AI skills, and improved AI literacy through communities of practice.

Objectives

The overarching aim of this research project is to investigate the points of friction between artists and AI innovations in creative practices, with the goal of informing the development of alternative tools and frameworks that more effectively align with artistic needs, values, and agency.

Through a sociotechnical approach, the study aims to:
- Critically analyze the challenges posed by AI integration in artistic domains;
- Identify and formalize design guidelines that are aligned with artistic values and needs;
- Develop technological probes that illustrate the identified design guidelines.

Approach

The project contributes to Human-Computer Interaction (HCI) and adopts a qualitative, human-centered approach to investigate the friction between artists and AI innovations, combining empirical data collection with design-oriented research.

First, the project will rely on semi-structured interviews with artists from diverse disciplines, including visual arts, music, creative writing, and digital media, to capture their perspectives, concerns, and expectations regarding AI technologies. Semi-structured interviews provide flexibility to investigate the range of concerns that artists may have with respect to the current design of AI (as explored in [2]). The interviews will be analyzed using thematic analysis to identify themes and areas of contention in the relationship between artists and AI. We plan to conduct several iterations of interviews throughout the project, with groups of artists who consent to participate in the project and who will be recruited from the supervisor's and collaborators' network.

Building on these insights, the project will adopt a research-through-design approach to prototype and evaluate alternative AI tools or frameworks that better fit artistic needs. These prototypes, called technology probes, will be iteratively refined based on feedback from artists. The aim of these probes is to evaluate certain assumptions and features of artist-centered AI,

such as innovative approaches to AI explainability or alternative metrics to conventional ones. In practical terms, the technology probes we are considering will be implemented within the Marcelle framework [3], which allows rapid prototyping of interactive applications with machine learning.

Skill requirements

The candidate will have a background in Human-Computer Interaction, with expertise in empirical studies and programming skills.

Suitability for SCAI

The project is aligned with SCAI's strategy, in particular this doctoral project responds to the Center's research strategy in the field of Human-Computer Interaction (HCI). This discipline is, nowadays, fundamental, in view of the spread of AI technologies in a large number of applications facing users and groups of users, and raising new challenges such as trust, user experience, technology adoption, and creativity. In particular, the creative and cultural sectors play an important role in the center's strategy in the context of digital humanities and the support and understanding of creative mechanisms. Therefore, this project, at the intersection AI and HCI, would contribute to the Centre's endeavor of supporting research and education in AI and its applications.

Supervision

The project will take place at ISIR (Institute for Intelligent Systems and Robotics), within the HCI Sorbonne group[1], supervised by Baptiste Caramiaux. The supervisor is a researcher in Human-Computer Interaction, specializing in the use of AI in the creative and cultural sectors. His research has focused on the practices of visual and digital artists with AI, the impact of technological innovation on these practices, and the critical analysis of dominant discourses on the impact of this technology on creative work. He has supervised 7 PhD theses, 5 of which he has defended, and 3 post-doctoral projects. He holds an *Habilitation à Diriger des Recherches* from the Université Paris-Saclay, and is a laureate of Microsoft Research's AI & Society program.

The project will be carried out as part of a working group on the study of artistic practice in the age of AI, initiated as part of Microsoft Research's AI and Society program. The collaborators are Gonzalo Ramos, Jenny Williams, Q. Vera Liao, Kate Crawford.

Relevant publications by the supervisor

Publications in reversed chronological order on the topic addressed in this project.

[1] Caramiaux, B., Crawford, K., Liao, Q. V., Ramos, G., & Williams, J. (2025). Generative AI and Creative Work: Narratives, Values, and Impacts. *arXiv preprint arXiv:2502.03940. (under review at AI & SOCIETY)* https://arxiv.org/pdf/2502.03940

[2] Caramiaux, B., & Fdili Alaoui, S. (2022). "Explorers of Unknown Planets" Practices and Politics of Artificial Intelligence in Visual Arts. *Proceedings of the ACM on Human-Computer Interaction*, *6*(CSCW2), 1-24. https://dl.acm.org/doi/pdf/10.1145/3555578

[3] Françoise, J., Caramiaux, B., & Sanchez, T. (2021, October). Marcelle: composing interactive machine learning workflows and interfaces. In *The 34th Annual ACM symposium on user interface software and technology* (pp. 39-53). https://dl.acm.org/doi/pdf/10.1145/3472749.3474734

[4] Caramiaux, B. et al. (2019). AI in the Media and Creative Industries. *[White Paper] New European Media (NEM)*, 1-35. https://arxiv.org/pdf/1905.04175

[1] Group's website https://hci.isir.upmc.fr/