

Explainable AI for the Arts 3 (XAIxArts3)

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Abstract

The third workshop on Explainable AI for the Arts (XAIxArts) continues to bring together and expand a community of researchers and creative practitioners in Human-Computer Interaction (HCI), Interaction Design, AI, explainable AI (XAI), and Digital Arts to explore the role of XAI for the Arts. XAI is a key concern of Responsible and Human-Centred AI, emphasising the use of HCI techniques to explore how to make complicated and opaque AI models more understandable to people. The previous workshops moved from mapping the landscape of XAI for the Arts to co-developing an XAIxArts manifesto. To continue driving discourse on XAIxArts, the anticipated outcomes of this workshop are: i) fresh insights into the evolving challenges of AI bias, lack of transparency and barriers to inclusivity through discussion of current and emerging XAIxArts practices; ii) co-developed speculative futures which expand XAIxArts discourse beyond post-hoc rationalisations of AI decisions into the imaginative possibilities of AI as an interlocutor in the creative process; iii) plans for a co-developed proposal of an edited book on XAIxArts; and iv) community expansion and engagement in wider discourses on Responsible and Human-Centred AI.

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CCS Concepts

• **Human-centered computing** → **Human computer interaction (HCI)**; • **Applied computing** → **Arts and humanities**; • **Computing methodologies** → **Artificial intelligence**.

Keywords

Artificial Intelligence (AI), Explainable AI (XAI), Responsible Artificial Intelligence (RAI), Generative Arts, Human-Computer Interaction (HCI), Interaction Design

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1 Workshop Topic

Explainable AI (XAI) research [27, 34] explores methods for making complex AI models, such as deep learning systems, more interpretable. XAI approaches are core to the broader fields of Responsible AI [2, 20] and Human-Centered AI [40, 44], and a trending topic of discussion in Human-Computer Interaction (HCI) research. However, XAI research mostly examines functional and task-oriented explanations of what an AI is doing [5–8]. For example, technocentric explanations might explain how an image classifier works to help debug and improve its accuracy [53]. This emphasis is reflected in seminal XAI research such as Gunning [27] and Guidotti et al. [26]. For the more personal, subjective, and open-ended activities

of the Arts, XAI raises many, often philosophical, open questions such as what does it mean to explain AI models in the Arts? Is the complete explanation conducive or detrimental to key qualities of the creative user experience such as serendipity [43] or ambiguity [24]? Could practice-based approaches and artists' perspectives create more engaging and nuanced explanations of AI? Could XAI be harnessed to foster more inclusive and ethical practices in using AI in the creative process [14]? Could these insights apply to XAI research and Responsible AI more broadly?

We argue that artistic practice offers an alternative perspective for examining AI explanations, beyond current techno-centric explanations of AI, elucidating meaningful insights for use by the multi-disciplinary C&C community and HCI more broadly.

The inaugural workshop was held in 2023 as part of the ACM Creativity and Cognition conference. Since the beginnings of the workshop series, there have been many shifts in the landscape of AI for artists. For example, transformer architectures, initially designed for natural language processing, have been adapted for image generation tasks [18], and the increased use of text prompting models in various artistic practices [39], and the development of a wider range of cross-media generation models [31]. Hybrid-models that leverage the strengths of different AI approaches are also being developed, most notably DeepSeek [28]. At the same time as these developments, there have also been movements by artists towards more responsible collaborations with AI [41]. The aim of this workshop is to continue to foster dialogue and innovation around these advancements, ensuring that AI remains a transparent and accountable tool for artistic practice.

1.1 Workshop Objectives

This third workshop on XAIxArts will expand upon the community built at the ACM Creativity and Cognition conferences in 2023 and 2024. Our first workshop brought together 26 participants with 14 accepted submissions, exploring the XAIxArts landscape across emergent themes to initially frame XAIxArts. The second brought together 29 participants with 11 accepted submissions expanding our community to North America, exploring more deeply how XAI could be applied to the Arts and how the Arts might contribute to new types of XAI, and leading to the generation of the XAIxArts Manifesto [14]. The objectives of this third workshop are to build on the success of previous workshops to:

- Expand our international community of researchers and practitioners who explore XAI for the Arts. We will take advantage of the online format to reach out to potential collaborators across the globe.
- To collect and critically reflect on state-of-the-art XAIxArts practice and identify ways to increase diversity and inclusivity, emphasizing its value to the field of responsible AI.
- To co-develop speculative futures, highlighting potential interventions from XAIxArts that could better support people's creativity. This builds on the previous workshop discourse which identified responsible AI and ethics as a crucial component of XAIxArts.
- To continue co-development of a proposal for an edited book on XAIxArts e.g. with Springer.

These objectives will be explored in the workshop building upon the themes generated from reflection across our first and second workshop (outlined in Section 2) and the activities (outlined in Section 4.1).

2 Workshop Themes

The first XAIxArts workshop [8] themes focused on initial questions on what explanation might mean in the context of creative practice, and on the challenges of creating (e.g., training AI models), co-designing AI (e.g., design processes for AI), and interacting with AI (e.g., how to interact with multidimensional data). The second workshop [10] expanded this discussion to more specific themes on Explainability in AI for the Arts such as on interacting with the temporal nature of data [32, 49], using AI as a design material [1, 30, 38, 54] and interface [47, 50], and on XAI approaches for creative practice such as conversational interfaces [55] or being able to reproduce error [33]. For this workshop, we continue the discourse and discussion from the previous workshop and its manifesto [14], emphasizing ways to ensure that explainability in AI is used to promote fairness, ethical, and responsible practice as outlined in the following sections.

2.1 Theme: Reducing Marginalisation by AI

Current AI models tend to prioritise certain views, experiences and perspectives [19, 29]. This raises critical questions about inclusion and exclusion in AI systems: Who is represented, and who is marginalised? Whose perspectives are privileged, and who holds power in shaping these models? How can we ensure equal accessibility across diverse user groups? For example, Raman and Brady [42] highlights how blind artists' express concerns about the cultural perceptions and labeling of AI-generated art, whilst seeing interest in AI images as a collaborative tool. Further examples include Bryan-Kinns et al. [12] and Vigliani et al. [51] who both explore the task of generating music beyond the genres represented in dominant datasets such as Western Classical music or pop music. These examples highlight just a fraction of the broader issue of bias in training data and its impact on creative expression.

Bias in artistic practice using AI is an often assumed inevitable consequence as a result of the datasets used. Indeed, datasets are often the foundational material for artistic systems using AI. However, artists and developers can challenge these biases and take an active role in curating datasets that reflect a broad range of cultural, social, and aesthetic perspectives. This workshop seeks to examine whether insights from the Arts suggest more transparent and ethical processes for the creation of and adoption of AI, to subvert current practice, and ensure fairness in AI models and their use. And whether Arts practices can be used to explain the inherent biases of AI to mitigate its mismanagement?

2.2 Theme: Adapting AI for Arts Practice

Most existing generative AI models create content across the Arts from visual arts [21] to music [16]; however, HCI research on how they should be designed for use in creative practices is still under-explored [32, 36, 46]. Across XAIxArts so far, we have identified opportunities for current AI tools to be pushed for creative endeavour and preserve artists' agency in creative practices. For example,

artists have navigated generative AI models to expose their bias [1] or explored latent spaces by way of exposing its limits [13, 38, 52]. Broad [4] provides several examples of how to subvert, corrupt, upend, and hack generative neural networks to unveil otherwise unseen aspects of these models. These methods and techniques resonate with qualities of the creative user experience of surprise [25], ambiguity [24] and reflection [23] – often in opposition to the technocentric and functional goals of traditional XAI [26, 27]. However, there are still open questions on how to balance these techniques to offer both explainability and opportunity for serendipity and surprise.

2.3 Theme: Evaluating XAI for the Arts

Many existing methods for evaluating XAI models focus on metrics such as AI model generation and reconstruction accuracy or how much they contribute to productivity. This overlooks key qualities of creative user experiences such as to be playful. Existing HCI research methods also tend to prioritise data collection and generalisation across representative samples – at odds with creative practitioners who typically have unique individual creative practices [45], or where explanations must be tailored on a case by case basis e.g. to an individual’s AI literacy [37] or ability [48]. Whether an AI system produces explanations conducive to an artist and their artistic identity is an open-ended and subjective question and yet is crucial to XAI’s meaningfulness in the arts. A system that does not align with an artist’s workflow and identity may undermine their agency, while one that supports their creative vision can become a useful tool for artistic exploration and expression. XAIxArts could help to develop ways of undertaking and structuring research that accounts for first-person perspectives and explanations of AI art’s aesthetic, rather than more attempting to generalize across large populations.

2.4 Theme: Mappings for Real-Time Interaction

Explaining AI models through interaction is complex in artistic domains. For example, explanations are often needed in-the-moment as people interact with AI in real-time settings, such as in jazz improvisation, or real-time rhythm generation [51]. This contrasts with post-hoc explanations more frequently used in XAI research. Mapping real-time user interaction to the output of an AI system in a way that is conducive to the creative process also poses open questions. For example, Zheng et al. [56] present a mapping strategy for interacting with the latent spaces of generative AI models, with an approach involving unsupervised feature learning to encode a human control space and mapping it to an audio synthesis model’s latent space. Similarly, Wilson et al. [52] explored how performers’ embodied interactions with a Neural Audio Synthesis model allow the exploration of the latent space of such a model, mediated through movements sensed by e-textiles. In both cases, exploration through interaction with the latent space offers the explainability of the AI. This research highlights the complexities of designing AI systems that not only generate real-time explanations but also align with the fluid and embodied nature of artistic practice.

2.5 Theme: AI to Spark Reflection

The Arts offer an opportunity to be playful with AI and at the same time to expose inherent biases and imperfections of AI systems to audiences – turning potential flaws into opportunities for sparking reflection and creative expression. Lewis [35] recognizes the potential of their account of AI use to innovate thought and action on whether their work was an outcome of the AI’s design, or whether the AI was following a divergent path - exploring how AI explanations are shaping their creative process. The LOKI artwork [17] especially leveraged AI to create mischief, offering divergent explanations to encourage audiences to distrust AI and reflect on its working. There is potential for the Arts to suggest how to design playful AI explanations which could spark reflection [22, 23], beyond current understandings in more productivity-focused domains e.g. [15]. How to evaluate whether reflection on AI and its explanations of its processes has occurred is an open-ended question.

3 Workshop Audience and Promotion

The primary audience are researchers and creative practitioners in AI, XAI, Responsible AI, Human-Centred AI, digital arts, HCI, and Interaction Design. As part of our community building, we aim to reach out to the wider (digital) Arts community to invite submissions, and we plan to leverage the online format to encourage participation from across the globe.

We will share accepted submissions prior to the workshop to encourage researchers and artists to reflect on the use of AI and its explainability for creative contexts. A call for participation will invite submissions for review, with emphasis on the workshop’s themes. Learning from our community engagement in previous workshops, submissions can be of one of: i) 4-page position paper; ii) 4-page pictorial; or iii) a 5-minute video. The call will be distributed among HCI email lists (including ACM C&C, ACM SIGCHI), AI research lists (especially XAI and AI and Arts lists), Digital Arts lists (including specific artistic domains such as New Interfaces for Musical Expression (NIME) and International Symposium on Electronic Art (ISEA)), and interaction design lists. We will also send the call to our closed industry and practitioner networks.

4 Workshop Organization

The workshop will be held online, following the format of our first workshop and in-line with ACM C&C’s 2025 conference delivery format. Workshop organisers will review the submissions and select up to a maximum of 30 participants for the workshop. The criteria for acceptance is based on the relevance of the work in relation to the themes listed in Section 2. As successful in previous workshops, the accepted papers, pictorials, and videos will be shared with participants via the workshop website in advance to encourage early reflection, with space for early brainstorming available on the interactive online whiteboard Miro (see Section 4.2).

4.1 Workshop Tentative Schedule

Table 1 summarises an indicative workshop schedule, with each part detailed in the sections below. The suggested time of day is GMT to allow participation from both North America and China

to be staggered across the schedule, with presentations in both the morning and afternoon sessions to accommodate.

4.1.1 Lightning Presentations. Participants will present their work for 5-10 minutes maximum (depending on the number of participants) on their use of/interest in XAI for the Arts, including demos. Emphasis is placed on the *uses* of XAI, which theme(s) their use of XAI relates to (Section 2), and showcasing demos or proof-of-concept XAIxArts systems if applicable.

4.1.2 Speculative Futures. Participants will critically and creatively explore how explainable AI (XAI) might shape the future of artistic practice. Through speculative design, they will envision new AI tools, interactions, and creative ecosystems that prioritize explainability, agency, and artistic identity. Participants will form groups, with artists from different domain interests (e.g., music, visual arts, dance, literature), bringing forth their unique domain-knowledge and experience. First, participants will identify challenges related to XAI (e.g., loss of artistic control, opacity of AI decisions, bias in training data) and discuss how these challenges were reflected in the lightning presentations. Based on the discussion participants will then be given a narrative structure [3] to guide their co-creation of tasked a speculative future. The narrative will guide them through reflecting on their chosen XAI challenge and facilitate the proposal of tangible XAI interventions for creative and societal transformation. The cross-collaboration of ideas will be useful in supporting the wider aims of the workshop and drive XAIxArts discourse. The narrative framing will also more explicitly direct attendees to explore how XAI can enable positive societal change through creative practice.

4.1.3 Community Building. Participants will discuss the next steps for community building, with a focus on ideas for the proposal of an edited book on XAIxArts. Future networking, artistic events, and identification of funding opportunities will also be discussed. Indeed, the workshop will also explore ways to expand our network of researchers and artists working in XAIxArts – we are particularly motivated to broaden participation to include more artist voices. We also plan to host further networking events online and locally within our expanded network, and to build a knowledge base for support for networking funding and collaborative research on XAIxArts issues.

4.2 Tools for Workshop in Virtual Space

We will use the online whiteboard system Miro throughout the workshop to support community engagement and discussion prior to, during, and after the workshop. This builds on successes in previous workshops - examples shown in Figure 1a. During the sessions, participants will live stream their presentations, demos, and question-and-answer sessions online using MS Teams to support participation. The live presentations will be recorded and auto-subtitled by MS Teams and then made available on the workshop website to allow for asynchronous viewing across time zones. We have workshop organizers from a range of time zones (Canada, USA, UK, China) and will be able to offer almost 24-hour asynchronous interaction.

4.2.1 Provision of Tools for Workshop in Virtual Space. All software needed for the online workshop will be provided by the organizations of the workshop through institutional subscriptions to MTeams and Miro.

5 Deliverables & Outcomes

Accepted submissions will be published on the XAIxArts website¹ initiated in the first workshop alongside links to presentation videos and the XAIxArts speculative futures co-developed in this workshop. Accepted papers will also be collated in an arXiv workshop proceedings following the workshop, as we did for previous editions [9, 11].

Following discussion, we will propose an edited book on XAIxArts, for example, to Springer’s Cultural Computing series. This could include expansions of selected submissions from across the XAIxArts workshop series.

6 Workshop Organizers

Corey Ford (workshop co-chair) is a Lecturer in Computer & Data Science in the Creative Computing Institute at University of the Arts London. They’re close to completing their PhD from the UKRI AI and Music Centre for Doctoral Training at Queen Mary University of London. Ford is the Early Career Advocate for the Computer Arts Society within the British Computing Society, and co-organizes the UAL ACM student chapter. Ford has previous experience in conference and workshop organization from both XAIxArts workshops and workshops at NIME, as Student Volunteer Co-Chair for ACM C&C 2023 and 2024, and as editor of the Digital Music Research Network Proceedings 2020. Ford also served as AC on the ACM DIS Research Through Design subcommittee 2024.

Elizabeth Wilson (workshop co-chair) is an interdisciplinary artist and researcher, currently lecturing at The Creative Computing Institute at UAL, having recently completed a PhD as part of the Media and Arts Technology Centre for Doctoral Training at Queen Mary University of London. Wilson’s research interests include live computer music, epistemologies of artificial intelligence and human-machine co-collaboration. Wilson has been co-lead on academic organisation for projects such as the Algorithmic Pattern Salon in both 2023 & 2025.

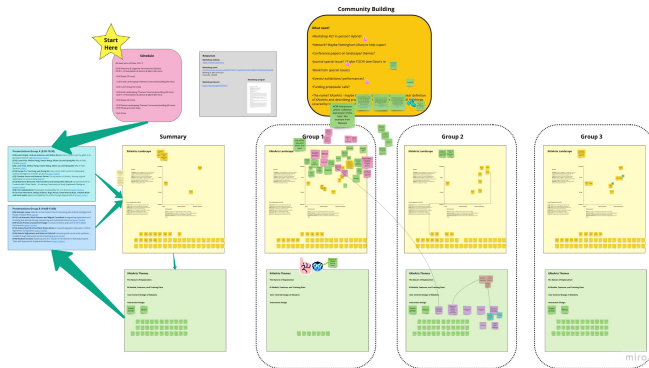
Shuoyang Jasper Zheng is a PhD student at the Centre for Digital Music, Queen Mary University of London, supported by the UKRI Centre for Doctoral Training in AI and Music. His works explore AI systems through their convergence with media and arts, primarily focusing on the development of interactive and understandable tools that facilitate musical creations and expressions, and on the understanding of how these technological advances impact artistic practices. Shuoyang has been a member of the program committee for the previous XAIxArts workshop.

Gabriel Vigliensoni is an electronic music artist, performer, and researcher exploring the creative affordances of machine learning paradigm in the context of sound- and music-making. His practice combines formal musical training with extensive studies and experience in sound recording, music production, music information retrieval, human-computer interaction, and machine learning to develop novel approaches to music composition and performance.

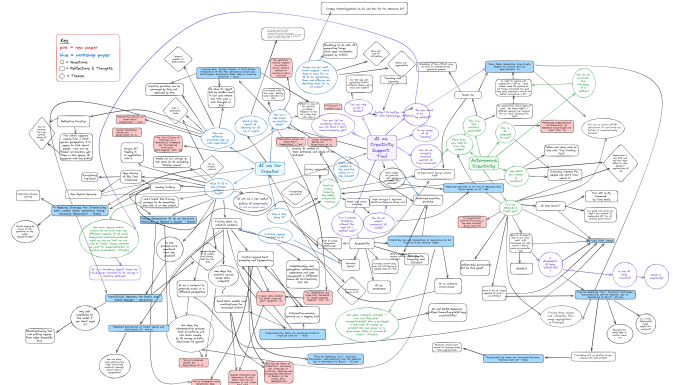
¹xaixarts.github.io

Table 1: Provisional Indicative Workshop Schedule

| Activity | Time GMT | Description |
|--|-----------------|---|
| Welcome | 9:00–9:15am | Opening remarks and an overview of workshop goals |
| Presentations (§ 4.1.1) | 9:15–10:45am | ~8 x Lightning talks featuring short presentations, optional demos, and brief discussions |
| Refreshment break | 10:45–11:00am | A chance to grab a refreshment and recharge |
| Speculative Future: Planning (§ 4.1.2) | 11:00am–12:00pm | Group discussions to analyze insights from the morning and shape ideas for speculative future interventions in XAIxArts |
| Lunch | 12:00–1:00pm | Informal networking over lunch, with opportunities to engage with demos |
| Speculative Future: Presenting (§ 4.1.2) | 1:00–2:00pm | Remaining groups showcase their speculative future concepts |
| Presentations (§ 4.1.1) | 2:00–3:30pm | ~8 x Lightning talks featuring quick presentations, optional demos, and discussion |
| Refreshment break | 3:30–3:45pm | A short pause to recharge before the final session |
| Community Building (§ 4.1.3) | 3:45–4:30pm | A collaborative discussion exploring future projects, funding opportunities, and the development of an edited volume |
| Close | 4:30pm | Concluding remarks, followed by informal networking |



(a) Miro board from the first XAIxArts workshop



(b) Co-created mindmap from the second workshop exploring the themes that lead to the creation of the XAIxArts Manifesto [14].

Figure 1: Brainstorming from the first and second XAIxArts workshops.

He holds a PhD in Music from McGill University and is currently an Assistant Professor of Creative Artificial Intelligence at Concordia University.

Jeba Rezwana is an Assistant Professor at Towson University, MD, USA. She received her PhD from the University of North Carolina at Charlotte in 2023. Her research interest focuses on Human-Computer Interaction, Human-AI Co-Creation, Human-Centered AI, and Interaction Design. Her long-term research goal is to make co-creative AI human-centered, ethical, transparent, adaptable and useful AI systems that empower users to create novel artifacts, develop skills, and solve complex problems in different creative sectors. She has been a part of the program committee for the HAI-GEN (Human-Centered Generative AI) workshop in the

ACM IUI since 2022. Additionally, Jeba has served as an associate chair of the review committees for CHI 2023.

Lanxi Xiao is an artist, designer, and TEDx speaker based in China. She is currently a PhD candidate in Art and Technology at the Academy of Arts and Design, Tsinghua University. Her research focuses on AI-driven interactive installations and immersive XR art experiences, integrating AI, large language models, and digital human technologies to explore human-AI collaboration. Lanxi's works have been exhibited at the 6th Art and Science International Exhibition, China National Communication Center for Science and Technology, the National Exhibition and Convention Center, the National Indoor Stadium and Beijing Science Week.

Michael Clemens is a Ph.D. student at the New Jersey Institute of Technology with a background in human-centered computing

and electrical engineering. His research focuses on developing co-creative intelligent instruments for music production, leveraging ML and AI insights and techniques to enhance the creative process while ensuring musicians retain creative autonomy.

Makayla Lewis is a senior lecturer in Computer Science (User Experience Design) at Kingston University London, UK. With a PhD in HCI and Accessibility, her research focuses on UX design, auto-ethnography, integrating sketching and arts and technology, and digital and accessible museums and galleries. Makayla is an accomplished visual thinker and sketchnoter, contributing to four visual thinking books and various HCI/UX publications.

Drew Hemment is Professor of Data Arts and Society at the University of Edinburgh and Director of Doing AI Differently at The Alan Turing Institute. Doing AI Differently is an international initiative and community working to integrate arts and humanities into the core of AI development. Drew has experience over 30 years as an artist, curator and academic researcher. He conducts research in the emerging area of experiential AI, with a focus on providing end users with richer modes of model understanding and greater agency in co-creative experiments with AI. Drew is founder of FutureEverything, and he currently leads The New Real, a centre for AI, Arts and Futures research.

Alan Chamberlain is a Principal Research Fellow at the University of Nottingham, UK, and a member of the Mixed Reality Lab. He is the Creative Industries Sector Lead for the UKRI TAS Hub (Trustworthy Autonomous Systems), the Principle investigator of the TAS Responsible Research and Innovation I & II projects and previously Co-director of nTAIL - AHRC Network on Theatre, AI and Ludic Technologies and the EXIoT project - Experimental IoT: Explorations in Sound Art and Technology. He is an interdisciplinary researcher with publications in top tier venues which range from qualitative studies 'in the wild' through to lab-based quantitative HCI-based research.

Helen W. Kennedy is Professor of Creative and Cultural Industries at the University of Nottingham, UK. Her research interests are feminist games culture and the wider diversification of access to creative practice; the ludification of cultural experience, innovations in experience design and the cultural evaluation of immersive experiences. Kennedy has published widely in game studies and the emergent field of live cinema where her work focuses on the intersections between performance, play and narrative in the experience design. She has led a number of national and international projects seeking to improve women's access to and experience within spaces of creative production – across screens, VR, and immersive technology more broadly. A key characteristic of these projects is collaboration and co-creation with individuals, grass roots organisations and sector advocacy groups. She has been organizing interdisciplinary games and play related conferences, symposia and workshops since the inaugural UK games conference – Game Culture – in 2002. More recently, since 2016, she has been co-convening the industry/academic/artist Live Cinema network events, including Live Xinema in 2022. She has also designed and delivered game jams and VR Hackjams with artists and researchers.

Nick Bryan-Kinns is Professor of Creative Computing at the Creative Computing Institute, University of the Arts London. He is a Fellow of the Royal Society of Arts and the British Computer Society, and Association of Computing Machinery Senior Member.

Bryan-Kinns has published award winning papers on his extensively funded research into Human Centred AI, explainable AI, AI Music, cross-cultural design, mutual engagement, interactive art, and tangible interfaces. Bryan-Kinns is founding Chair of the XAIxArts International Workshop Series and is General Chair of the ACM Creativity and Cognition conference 2025 and 2026.

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