Advancing Curatorial Practice with Archives using AI

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1. INTRODUCTION

This paper explores the potential of artificial intelligence (AI) to transform traditional archives from static repositories into dynamic, interactive platforms. It is argued that AI can democratise access to archives, facilitating a multiplicity of interpretations in a shifting cultural landscape. The investigation focuses on the intersection of poststructuralist theory and AI's capabilities in archiving, aiming to support knowledge organisation and retrieval for re-creative practice.
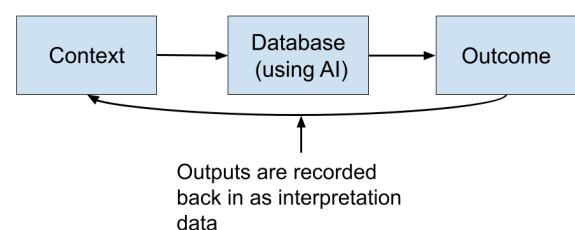
2. LITERATURE REVIEW

The incorporation of insights from Roland Barthes, Thomas Kuhn (1962), and Jean-François Lyotard (1984) within this study's framework serves as a foundation for reimagining archival access and organisation. Barthes' concept that a text's meaning is not fixed but created through reader interaction (Barthes, 1977), Kuhn's assertion that scientific inquiry is shaped by prevailing paradigms, and Lyotard's critique of grand narratives all contribute to an understanding of knowledge as inherently flexible and context-dependent. Drawing parallels between these theoretical perspectives highlights the potential for archives to evolve beyond static repositories of information. This approach advocates for a dynamic interaction with archives, where Large Language Models (LLMs) enable more personalised and context-aware explorations. Although none of the authors directly address archiving, their theories collectively justify a more open, accessible, and evolving practice towards the creation and organisation of knowledge.

3. RESEARCH FRAMEWORK

The framework presented in Figure 1 combines a traditional archival approach, augmented with an AI facilitated Database that is capable of complex two-way interactions with users. It can both deliver archival content, and receive data on the interpretation of that content back to guide its future interactions. This ability for Interpretation Data to be fed back in to support the archive to develop a broader contextual lens for itself, supports the development of the poststructuralist approach described in section 2..

Figure 1: Example of suggested Archival Framework

'Context' reflects the diverse perspectives of archive users, shaped by their knowledge, cultural backgrounds, and creative practices, which in turn influence their engagement with the archive and interpretation of its contents.

The 'Database' leverages a trained LLM to manage archival interactions. This encompasses a Digital Archive, Descriptive Metadata, and AI or user generated Interpretation Data, with AI serving as a conduit between the archive and its users.

The 'Outcome' emerges as the tangible products of this interaction—new creations, critical writings, or exhibitions that build on original works with AI-generated insights, enriching the discourse around them.

4. METHODOLOGY

A practice-based research design integrating workshops tasks focussed on materials held in Computer Arts Archive, observation and interviews was devised. The workshop was organised into three phases: Exploration, Interaction, and Creation. During the Exploration phase, artists received an archive overview, setting a contextual foundation. The Interaction phase involved direct engagement with the archivist, offering artists deep insights into the archives' cultural and historical contexts. Finally, in the Creation phase, participants developed new works inspired by their explorations. Observation was guided by the Flanders Interaction Analysis Categories (FIAC) framework (Flanders, 1970), adapted to evaluate engagement and knowledge retrieval in an archival setting. This approach, further informed by Dervin's Sense-Making Approach (2003) and Kuhlthau's Information Search Process (ISP) model (1991), provided a structured lens to assess artist interactions. Data collection spanned over four days, focusing on participant engagement, creative processes, and the potential for AI to enhance these interactions. Semi-structured interviews post-workshop aimed to delve into participants' motivations, emotional engagements, and the cultural impact of their work. Data was thematically analysed identifying how artists engaged with and reinterpreted archival materials, providing insights into their creative processes. This data will be fed into the LLM to refine its ability to guide future interactions with the archive in a future phase of this research.

5. PRELIMINARY FINDINGS

This study's thematic analysis showed the "Process and Methodology" and "Human Elements in Digital Art" as pivotal themes recurring within the discourse on digital archiving in artistic practices. "AI in Artistic Practices" emerged as a consistent area of debate from artists although few had solid conclusions. Participants frequently reflected on the transformative potential of digital tools to both challenge and expand traditional art-making processes, emphasising the importance of experimentation, playfulness, and a continuous dialogue with technological advancements.

6. CONCLUSION

The findings highlight the role of dialogue with an LLM for archival practice to support in-depth exploration of artistic processes. Fine-tuning LLMs to address questions about the systems behind art can help to capture core computational thinking behind works in an archive for future generations of artists. This allows not just an interview to be kept as interpretation data, but also a development log and critical analysis of the software including examples of the code developed for future visitors to examine.

The findings intimate a pathway for future research that integrates AI into a human-centred archival workflow illuminating how insights can be captured, coded, and made accessible through dialogic interfaces. The next phase of the research will concentrate on refining Natural Language Processing (NLP) technologies, such as the Retrieval-Augmented Generation (RAG) method discussed by Lewis et al. (2020). This phase aims to employ the extensive datasets provided by LLMs to enhance the contextual depth and encourage discussions surrounding archival items.

7. REFERENCES

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