

Title: xCurator - AI-supported exploration and curation of digital collections

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TL;DR

The "Creative User Empowerment" project by Badisches Landesmuseum Karlsruhe and Allard Pierson Amsterdam led to the development of xCurator, an AI-powered tool that transforms user engagement with digital museum collections by enabling personalization, deep exploration, and user-curated experiences with Language Models, signaling a shift in the museum's role in the digital age.

Abstract

The xCurator tool improves the accessibility and engagement of digital museum collections for end users. It uses machine learning technologies such as image and text embedding with advanced user-centric search to suggest relevant objects and information based on individual user interests. Users are provided with a personalised exploration of the collection and can interact with large language models enriched with collection data. This innovative approach is designed to empower users to act as curators, developing their own unique context within the digital collection. Although experimental with AI technologies, this represents a shift in the role of museums and cultural heritage in the digital age. The talk will describe the research and development process, reveal the underlying data strategies, and provide some methodological and ethical insights on how to develop a forward-looking data and AI strategy for cultural institutions.

Contribution:

How can AI help make digital collections in museums more accessible and engaging, and help users access context - and possibly even curate collections themselves? Which AI approaches and ML methods are appropriate, and which are not? How does AI technology change the way we approach and understand the role of the museum and cultural heritage, and how can we shape human-machine collaboration? As part of the Creative User Empowerment project (2021-2023), the Badisches Landesmuseum Karlsruhe and Allard Pierson Amsterdam worked together on these questions and developed the xCurator tool, which applies artificial intelligence techniques to the digital collection. The AI-supported curation tool aims to help users better access the museum's content and make it more personalised according to the user's interests. Data from the museum's collections is modelled as Linked Data, and the resulting knowledge graph is used to provide contextual information with user-selectable precision and recall. The xCurator suggests objects and information that match individual interests and provides further content and context. Machine learning methods are used to explore the collection more deeply, capturing similarities and differences between objects in the collection through image recognition and intelligent search technologies. In addition to these approaches to exploring the collection, users will be invited to interact with large language models enriched with collection data, so that they can actively write text about the objects and publicly share their story and findings with others. This access route, which is still in an experimental stage, has the potential to allow the user to become a curator and create their own interest-based context.