

Interpreting Strings, Weaving Threads: Structuring Provenance Data with AI

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Museums today are confronted with a difficult choice: whether or not to structure their ever-increasing collection data, and if so, to what extent? In this paper, we consider the case of provenance records and identify ways to strike the right balance between the benefits of structured data and the effort required to create it. In light of provenance research rising to political prominence, it seems logical for museums to create fully machine-readable data, as it can be intelligently searched, linked, analyzed, and visualized. However, given the complexity of ownership histories, with their gaps, uncertainties, and even at times contradictions, transforming such information into structured data is not as straightforward as it may appear. Museums face not only the risk of losing historical complexity in the digitization process but also time and effort in entering detailed information. As a result, museums still produce unstructured provenance data that is easily entered into a single field in their collection management systems.

Drawing on the promising results of a large provenance dataset, the focus of this paper is to describe the process of structuring provenance data with the help of Artificial Intelligence (AI) and address the usefulness and limitations of such a strategy. In particular, we will address the role of vagueness, incompleteness, subjectivity, and uncertainty of information when transforming provenance from textual records into fully machine-readable data. Here, we will show how traditional hermeneutic approaches can inform the design of digital methods, such as supervising AI in structuring provenance.

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