# AI in Technical Services Revisited 2025

*Compiled by Tim Hasin*

Aycock, Mary. 2025. "Prompting Generative AI to Catalog: The Promise and the Reality." *College & Research Libraries News* 86 (10): 423–30.

This article explores the viability of utilizing a specialized generative artificial intelligence (AI) called CatalogerGPT to provide quality metadata for large numbers of eBook titles lacking MARC bibliographic records.

Benahal, Amrutraj Ravi. 2024. "Evaluation of AI-Generated Keywords for Information Retrieval in Library Catalogues." *Journal of Information and Knowledge* 61 (4): 197–203. https://doi.org/10.17821/srels/2024/v61i4/171505.

"This paper examines challenges in current practices, notably the labour-intensive tasks of finding class numbers and subject headings. While the option to import MARC (machine-readable cataloging) records via protocols like Z39.50 provides some relief, the absence of readily available records presents significant obstacles, especially for locally published materials. Against this backdrop, this research explores AI's potential in generating relevant subject headings to streamline cataloguing processes and augment information retrieval." [Abstract]

Dobreski, Brian, and Christopher Hastings. 2025. "AI Chatbots and Subject Cataloging: A Performance Test." *Library Resources & Technical Services* 69 (2): 1–14. https://doi.org/10.5860/lrts.69n1.

"Libraries show an increasing interest in incorporating AI tools into their workflows, particularly easily accessible and free-to-use chatbots. However, empirical evidence is limited regarding the effectiveness of these tools to perform traditionally time-consuming subject cataloging tasks. In this study, researchers sought to assess the performance of AI tools in performing basic subject heading and classification number assignment." [Abstract]

Dover, Abby, and Jessica Grzegorski. 2025. "Artificial Intelligence Through the Lens of the Cataloguing Code of Ethics." *Cataloging & Classification Quarterly* 63 (6-7): 600–620. https://doi.org/10.1080/01639374.2025.2544137.

"This paper examines the use of AI tools in library and metadata operations through the lens of the Cataloguing Code of Ethics, an international framework for a responsible and inclusive approach to cataloging. After summarizing the history of the adoption of AI in libraries and tools in current use, the paper outlines the benefits and risks of the use of AI and discusses strategies for addressing the ethical challenges of implementing it in cataloging. The authors then propose possible paths forward in the creation of widely accepted guidelines for the ethical use of AI in cataloging and metadata operations." [Abstract]

Engel, Jonathan Yehuda, Dan Tam Do, Brenda Salem, and Tyler Anthony Cunningham. 2025. "Artificial Intelligence in Library Cataloging: A Review of Literature." *Journal of Library Metadata* 25 (4): 261–276. https://doi.org/10.1080/19386389.2025.2526913.

"This paper reviews existing peer-reviewed literature concerning the application of artificial intelligence (AI) technologies in the context of library cataloging work published since the public release of ChatGPT in 2022. Patterns of analysis in the literature are identified, rigor of

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investigations assessed, and areas for future work indicated. Existing peer reviewed literature tends to have optimistic-to-positive evaluations of the usefulness and applicability of AI technologies to the creation and maintenance of library metadata, but generally lacks compelling experimental evidence to support its findings. Additional investigation is necessary to establish performance benchmarks for both human and AI-assisted cataloging in order to adequately assess the desirability and efficacy of AI integration into library cataloging." [Abstract]

Feng, Na. 2025. "AI-Powered Knowledge Organization: A Next-Generation Approach to Library Classification using DeepSeek-R1." *Scientific Reports (Nature Publisher Group)* 15 (1): 38394. https://doi.org/10.1038/s41598-025-22272-z.

"With the advancement of information technology, libraries have shifted from traditional physical services to an integrated "offline + online" model, becoming digital hubs in the national public cultural service system. However, current book classification still relies primarily on manual efforts, which suffers from inefficiency and inconsistent standards, making it difficult to meet the growing demand for processing massive volumes of books. Leveraging the latest developments in artificial intelligence, this paper proposes an automatic book classification algorithm based on the DeepSeek-R1-Distill model to improve classification accuracy and efficiency. Experimental results demonstrate that the algorithm achieves an average F1-score of over 87% in a 21-category Chinese book classification task, validating its effectiveness. Future work could explore the integration of more advanced large language models and domain-adaptive pre-training strategies to further advance classification capabilities." [Abstract]

Gamage, Ruwan, and Prianwada Wanigasooriya. 2024. "Using Generative AI for Bibliographic Description: A Study with ChatGPT 4." *Journal of the University Librarians Association of Sri Lanka* 27 (2): 257. https://doi.org/10.4038/jula.v27i2.8083.

"This study explores the use of Generative Artificial Intelligence (GAI) in bibliographic description in university library catalogs. It focuses on GAI's potential in enhancing efficiency and maintaining consistency of bibliographic description while complying with cataloging standards such as MARC21, AACR2 and RDA. The study followed a qualitative methodology, examining 10 use cases in metadata extraction, RDA compliance of GAI generated catalog records, and error checking of existing catalog records." [Abstract]

Harisanty, Dessy, Nove E Variant Anna, Tesa Eranti Putri, Aji Akbar Firdaus, Noor Azizi, and Nurul Aida. 2025. "Is Adopting Artificial Intelligence in Libraries Urgency or a Buzzword? A Systematic Literature Review." *Journal of Information Science* 51 (2): 511–522. https://doi.org/10.1177/01655515221141034.

"This study aims to investigate the implementation of artificial intelligence (AI) in libraries from 2011 to 2020. This study uses PRISMA guidelines to perform a systematic literature review (SLR). The articles were obtained mainly from the SCOPUS database, with Google Scholar as the supporting database. AI can easily be adopted in libraries, especially for technical services such as classification and cataloguing, library management such as staffing and decision-making, library services such as referencing and information service, and for information literacy. Successful AI adoption is, however, still debatable, because there are many requirements that need to be met, so that it can be inclusively adopted in libraries." [Abstract]

Mannheimer, Sara, Natalie Bond, Scott W.H. Young, Hannah Scates Kettler, Addison Marcus, Sally K. Slipher, Jason A. Clark, Yasmeen Shorish, Doralyn Rossmann, and Bonnie Sheehey. 2024.

"Responsible AI Practice in Libraries and Archives: A Review of the Literature." *Information Technology and Libraries* 43 (3). https://doi.org/10.5860/ital.v43i3.17245.

"This paper presents an extensive literature and review analysis that examines AI projects implemented in library and archives settings, asking the following research questions: RQ1: How is artificial intelligence being used in libraries and archives practice? RQ2: What ethical concerns are being identified and addressed during AI implementation in libraries and archives? The results of this literature review show that AI implementation is growing in libraries and archives and that practitioners are using AI for increasingly varied purposes." [Abstract]

Michalak, Russell, and Devon Ellixson. 2024. "Buy versus Build: Navigating Artificial Intelligence (AI) Tool Adoption in Academic Libraries." *Information Services & Use* 44 (4): 316–26. https://doi.org/10.1177/18758789241296755.

"This paper explores the strategic decision to buy (vs build) Artificial Intelligence (AI) tools for use in higher education and academic libraries. It discusses the benefits and challenges associated with this approach and provides insights that can guide other academic libraries in making informed decisions about AI-driven tool adoption to support undergraduate research workflows. Detailed examples are provided and the pros/cons of each approach are provided." [Abstract]

Mwantimwa, Kelefa, and Grace Msoffe. 2025. "Application of Generative Artificial Intelligence in Library Operations and Service Delivery: A Scoping Review." *Technical Services Quarterly* 42 (2): 139–68. https://doi.org/10.1080/07317131.2025.2467574.

"This scoping review aimed to provide insights into the findings from scholarly works published between 1990 and August 2023. The study revealed a tremendous increase in research focusing on the application of generative AI in libraries in recent years. Number of publications on the topic varies significantly across different regions. Geographical regions like Asia have recorded a noticeable number of publications compared to America, Africa, and Europe. The review also found that descriptive, exploratory, and mixed research designs were the most common in the publications. Generative AI technologies such as Chatbots and Robots were widely reported to support multiple library operations and services." [Abstract]

Ngulube, Patrick, Neema Florence, and Vincent Mosha. 2024. "Integrating Artificial Intelligence-Based Technologies 'Safely' in Academic Libraries: An Overview through a Scoping Review." *Technical Services Quarterly* 42 (1): 46–67. https://doi.org/10.1080/07317131.2024.2432093.

"This scoping review addressed the question on how much research has been conducted on ethical issues and perceived risks associated with the safe integration of AI technologies in academic libraries." [Abstract]

Ogungbenro, Olabisi Docars, Ugwunwa C. Esse, Isaac Olowoporoku, and Abraham Christopher. 2025. "Revolutionizing Library Services: The Impact of Artificial Intelligence on Cataloguing and Access to Information in Nigeria Academic Libraries." *Journal of Library Metadata* 25 (2): 99–118. https://doi.org/10.1080/19386389.2025.2475418.

"Artificial intelligence has the potential to transform cataloguing operations, improve information access, and position academic libraries as key knowledge hubs. Nigerian academic libraries

may greatly improve their service delivery by adopting AI technologies that support research, teaching, and learning in the digital age. By analyzing the historical backdrop of cataloguing, the study emphasizes the limitations of traditional methods as well as AI-driven solutions. This paper investigates key AI tools like machine learning, natural language processing, and robotic process automation, providing examples of their use in automating metadata extraction, enhancing search capabilities, and personalized user experiences. The study outlines significant AI implementation issues, such as data consistency, ethical considerations, and technical training requirements, and makes solutions for overcoming these obstacles." [Abstract]

Scott, Rachel E., and Michael Fernandez. 2025. "AI: Initial Responses, More Questions." *Library Resources & Technical Services* 69 (2): 1–3. https://doi.org/10.5860/lrts.69n2.8431.

"An introduction to articles in the issue is presented on topics including digitizing pre-1978 dissertations at Binghamton University libraries, reconsideration policies at U.S.-based Association of Research Libraries, and artificial intelligence (AI) chatbots and subject cataloging." [Abstract]

Sun, Li. 2025. "Enhancing Cataloging with Generative AI: Converting Wade-Giles to Pinyin." *Cataloging & Classification Quarterly* 63 (4): 267–283. https://doi.org/10.1080/01639374.2025.2508956.

"This study examines the application of AI in automating the transliteration of Wade-Giles romanized titles into Pinyin in MARC records. Three generative AI tools--ChatGPT, Copilot, and Gemini--were evaluated for their efficiency, and they exhibited distinct strengths and limitations. The study highlights persistent challenges, including inconsistent outputs, fluctuating accuracy levels, and the need for data pre-processing." [Abstract]

Sussmeier, Stephanie, and Joshua A. Henry. 2025. "Mind the Gap!: How Do we Ethically Bridge the Divide Between the Cataloging/Metadata Community and the World of AI?" *Journal of Library Metadata* 25 (4): 241–259. https://doi.org/10.1080/19386389.2025.2525720.

"This article will discuss generative artificial intelligence (GAI) and cataloging/metadata creation in academic libraries, focusing on recent research and recommendations. This article will also explore the following questions: How can cataloging/metadata professionals at academic institutions incorporate general frameworks and standards about ethical AI implementation into policies for AI use in their workflows? How can technical services/cataloging departments promote their skills to provide accurate and culturally sensitive metadata? More importantly, how do cataloging/metadata professionals ethically fill the gap between the cataloging/metadata profession and the new world of AI without sacrificing job security?" [Abstract]

Vrindha, K., and Syamili C. 2025. "Navigating the AI Landscape in Libraries: A PRISMA-Based Systematic Analysis of AI Applications in Libraries." *Journal of Web Librarianship* 19 (1): 45–61. https://doi.org/10.1080/19322909.2025.2468697.

"This study identifies a significant rise in research exploring the intersection of AI and library services in recent years. However, the actual implementation of AI in libraries remains in its early stages at many institutions. The research systematically analyzes scholarly articles on AI in libraries using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method. Data were collected from the Scopus and Web of Science databases, with all publications assessed using the SPIDER tool. The quality of the selected articles was evaluated

using the Critical Appraisal Skills Programme (CASP) checklist. The findings reveal a notable surge in research activity exploring the relationship between AI and libraries. Specifically, ChatGPT shows potential to enhance library services in areas such as reference services, classification, and cataloging." [Abstract]