



A Bibliometric Analysis of Artificial Intelligence Research in Library and Information Science

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How to Cite this Article:

N, B. (2026). A Bibliometric Analysis of Artificial Intelligence Research in Library and Information Science. International Journal of Creative and Open Research in Engineering and Management, 2(6).
<https://doi.org/10.55041/ijcope.v2i6.298>

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<https://doi.org/10.55041/ijcope.v2i6.298>

ABSTRACT: The rapid advancement of Artificial Intelligence (AI) has significantly influenced the development of Library and Information Science (LIS). AI technologies, including machine learning, natural language processing, data mining, and intelligent automation, are increasingly being integrated into library operations to enhance information organization, retrieval, and service delivery. These technological innovations have enabled libraries to move beyond traditional information management practices and adopt more efficient, user-oriented, and data-driven approaches. As AI applications continue to expand across various sectors, the LIS community has shown growing interest in exploring their potential for improving cataloguing, recommendation systems, digital resource management, and user engagement. Consequently, scholarly publications addressing AI in library environments have increased substantially over the past decade. Understanding the evolution of this research area is essential for identifying emerging trends, influential contributors, and future opportunities.

Bibliometric analysis provides a systematic and quantitative approach for evaluating scientific literature and mapping intellectual structures within a research field. Through the examination of publication patterns, citation relationships,

collaborative networks, and thematic developments, bibliometric methods offer valuable insights into the growth and direction of scholarly inquiry. In the context of AI and LIS, such analysis helps reveal how technological innovations are transforming library services and knowledge management practices. It examines publication growth, geographic distribution, research collaboration, influential sources, and emerging thematic areas. By providing a comprehensive overview of the field, the study contributes to a deeper understanding of how AI is shaping the future of libraries and information services while identifying key areas for further research and professional development.

Keywords: Artificial Intelligence, Bibliometric Analysis, Machine Learning, Information Retrieval, Knowledge Management, Research Trends, Digital Libraries, Intelligent Information Systems.



INTRODUCTION

The domain of information science, artificial intelligence is conceptualized as the integration of computational intelligence, machine learning, and automated processing to optimize information retrieval, knowledge organization, and user-centric service delivery [1,2]. To map the rapidly evolving intellectual landscape of this field, bibliometric analysis serves as an essential methodology, providing a quantitative framework to evaluate research trends, collaborative networks, and the thematic emergence of AI-driven advancements [3,4]. This study seeks to address critical gaps in the understanding of AI adoption by analyzing publication output, influential scholarly contributors, and the shifting thematic landscape within Library and Information Science [5,6]. Specifically, this research aims to quantify the growth trajectory of AI-related literature and identify key authorship patterns and international collaboration trends from 2013 to 2023 [7,8]. Furthermore, this study addresses the following core research questions: what is the temporal growth and geographical distribution of AI-driven research in library science, and how have thematic clusters evolved to reflect shifts toward AI literacy and strategic service automation [9,10]. Additionally, this inquiry examines the extent to which collaborative research output particularly across international networks—correlates with higher citation impact and the integration of advanced technologies in library service innovation [11,12].

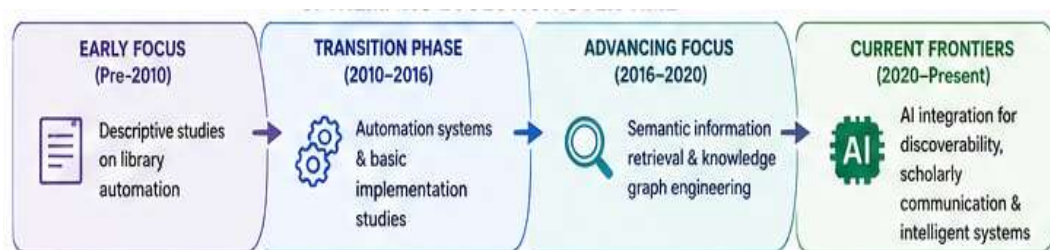


Fig 1: Thematic Evolution over Time

By systematically examining these bibliometric indicators, this research provides a comprehensive evidence base to support strategic decision-making regarding the deployment of machine learning and automated systems in modern information institutions [13,14]. This methodology enables a rigorous evaluation of how libraries are transitioning from passive repositories to active, automated environments that reconfigure traditional service paradigms [15]. By elucidating the centrality and density of these research clusters, this study clarifies the pivotal role AI plays in driving interdisciplinary innovation within academic and public library frameworks [16].

METHODOLOGICAL FRAMEWORK

The research utilizes data retrieved from the Web of Science and Scopus databases to ensure a robust and comprehensive coverage of scholarly output within the library and information science domain. These platforms were selected for their extensive multidisciplinary coverage, which includes a vast array of high-impact journals, conference proceedings, and books essential for tracking intellectual developments [18,19]. To maintain the integrity of the corpus, articles were selected based on predefined inclusion criteria, specifically focusing on peer-reviewed literature published between 2013 and 2023 that explicitly addresses artificial intelligence, machine learning, or automated systems within library contexts [22,21]. Exclusion criteria were applied to remove editorials, non-peer-reviewed conference abstracts, and duplicates to ensure the dataset exclusively represented rigorous scholarly investigations [22,23]. For the subsequent mapping and visualization of these bibliographic records, the software tools VOSviewer and CiteSpace were employed to facilitate co-word analysis, co-citation network mapping, and the identification of research frontiers [24,25]. Additionally, these computational tools enable the application of burst detection algorithms to track the emergence of trending topics and analyse co-authorship networks to measure the extent of international research collaboration [26,27]. These analytical platforms transform raw bibliometric metadata into visual clusters, thereby revealing the underlying collaboration networks and thematic trajectories that define the field. Bibliographic coupling was subsequently performed to discern the structural proximity of



prominent scholarly works, providing a snapshot of the most influential contributors who have shaped current innovation studies within the discipline [29].

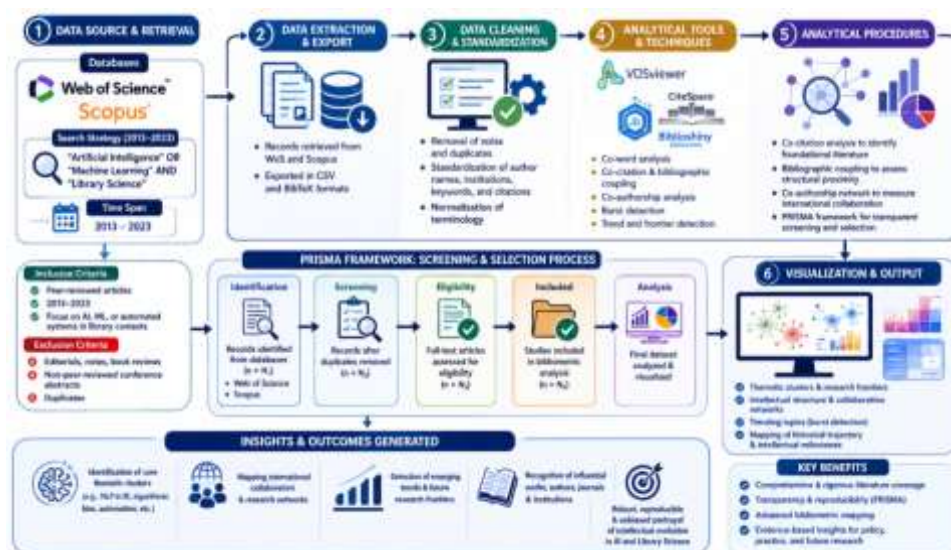


Fig 2: Methodological Framework

Furthermore, the retrieval process utilized a multi-stage search strategy involving Boolean operators specifically combining "Artificial Intelligence" OR "Machine Learning" AND "Library Science" to maximize the precision of the harvested bibliographic metadata. Following data extraction, the records were standardized into CSV and BibTeX formats to facilitate seamless integration into analytical software. The raw data underwent a rigorous cleaning process to remove noise and ensure consistency in author names and institutional affiliations before the network construction phase [33,34]. This cleaning procedure involved normalizing terminology and reconciling discrepancies in citation counts to maintain analytical accuracy [35,36]. Additionally, the Biblioshiny application was integrated into the workflow to further augment the visualization of intellectual patterns and research trends [37]. This comprehensive analytical pipeline allows for the identification of core thematic clusters, such as the application of natural language processing in information retrieval and the ethical implications of algorithmic bias in knowledge organization [38,39]. By leveraging the distinct strengths of VOSviewer and CiteSpace, this study ensures a robust methodological framework for visualizing both the intellectual foundations and the nascent research frontiers of AI within library science [40,41]. Through this structured approach, the study effectively mitigates selection bias while ensuring that the extracted network metrics accurately reflect the intellectual evolution of the domain [42,43]. Following this data processing phase, the analytical framework utilizes co-citation analysis to reveal the foundational literature that underpins the current scholarly landscape [44, 45] thereby mapping the historical trajectory and intellectual milestones that inform contemporary AI integration [46]. Moreover, the deployment of the PRISMA framework ensured transparency and reproducibility throughout the screening and selection processes [47].

PUBLICATION GROWTH TRENDS

An examination of the longitudinal output reveals a marked escalation in scholarly activity, characterized by a stagnant introductory phase between 2013 and 2016 followed by an exponential surge in publication volume starting in 2018. This upward trajectory reflects a paradigm shift in institutional priorities, as the academic community began to prioritize the integration of intelligent agents within information services [48]. This period of accelerated growth indicates a decisive transition from conceptual experimentation to the widespread implementation of machine learning models in academic and public library infrastructures [49]. Specifically, empirical evidence indicates that research output experienced a secondary inflection point post-2020, likely catalysed by the rapid adoption of large language models and widespread institutional digitization efforts [50]. This accelerating trend, which sees technology-oriented topics gaining significant prominence over the last decade [51], underscores a broader move toward data-driven library services and



the practical deployment of automated knowledge management systems [52]. The sustained volume of these publications mirrors findings in broader information science literature, where the growing recognition of AI's potential to revolutionize routine tasks and predictive analytics has fundamentally altered the scholarly landscape [53]. Comparative analysis between the initial period of 2013–2017 and the subsequent years highlights a more than threefold increase in annual output, reflecting the critical adoption of deep learning and large datasets in modern research [54].

CORE SUBJECT CLUSTERS AND COLLABORATIVE NETWORK ANALYSIS

Bibliometric mapping reveals that contemporary research is primarily bifurcated into two dominant domains: the operational optimization of library services including automated classification and recommendation systems and the strategic, ethical exploration of human-AI interaction [55,56]. Within these clusters, recent advancements have increasingly shifted focus toward the practical deployment of machine learning for metadata collection and the enhancement of user interface design [57,58]. Simultaneously, the thematic evolution reflects a migration from descriptive studies on library automation toward specialized inquiries into semantic information retrieval and knowledge graph engineering [59]. This transition underscores a growing scholarly emphasis on the technical integration of AI-driven systems to improve discoverability and scholarly communication [60]. Furthermore, this evolving research landscape mirrors broader shifts in disciplinary priorities, where inquiries into human-centered technology and automated knowledge organization increasingly define the intellectual contours of the field [61]. Beyond these technical focal points, emergent research is increasingly addressing the nuanced intersection of algorithmic transparency and robotic process automation in administrative workflows [62]. Current investigations now emphasize the integration of data mining techniques to address the complex information management demands prompted by the global health crisis [63].

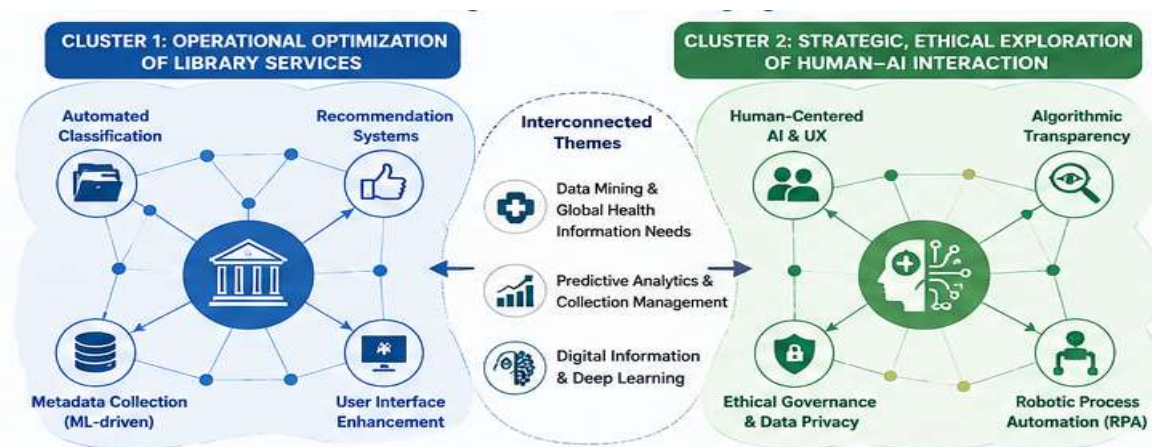


Fig 3: Relation of Cluster 1 and Cluster 2.

Additionally, there is a burgeoning interest in utilizing machine learning for predictive analytics and collection management, which enables librarians to anticipate user behaviour and optimize resource allocation more effectively [64]. This shift towards computational intensity is underscored by the emergence of "digital information" and "deep learning" as key themes in the literature [65]. Moreover, the thematic landscape is increasingly incorporating cross-disciplinary perspectives, with researchers highlighting that data privacy, system complexity, and ethical governance now serve as critical nodes in the discourse on intelligent library infrastructure [66,69]. Furthermore, citation network analysis indicates that these geographically diverse collaborations significantly accelerate knowledge flow, fostering a dense, interconnected scholarly ecosystem that transcends traditional disciplinary silos [70]. These collaborative clusters are further evidenced by a dense web of cross-citation, where influential authors act as gatekeepers of knowledge, bridging emerging research themes with established bibliographic paradigms [71].



INFLUENTIAL RESEARCH OUTPUT

High-impact papers in this domain often center on the practical deployment of neural networks and data mining methodologies, establishing foundational frameworks for contemporary LIS research [72]. These seminal works frequently address the integration of AI to enhance information retrieval and collection management, often highlighting the critical role of interdisciplinary partnerships between computer scientists and information professionals [73,74]. Furthermore, prominent journals such as IEEE Access have played a pivotal role in disseminating these breakthroughs, consistently serving as primary outlets for large-scale, multi-authored studies that define the current trajectory of the field [75]. Beyond these technical journals, the bibliographic coupling of seminal papers reveals a robust intellectual structure, where shared references to foundational studies in algorithmic design and machine learning provide a common conceptual basis for modern LIS inquiries [76]. This synthesis of diverse research traditions not only elevates the visibility of LIS contributions in technical circles but also underscores the pivotal influence of sustained international cooperation in navigating the complexities of emerging AI-driven paradigms [77,78]. These institutional dynamics are further reinforced by the high between centrality of core research hubs, which facilitate the dissemination of methodologies across disparate regional clusters [81, p. 9]. Such quantitative disparities often reflect variations in research funding environments and the differing institutional priorities that govern international co-authorship [82,83].

RESEARCH IMPACT ASSESSMENT

Bibliometric indicators reveal that research regarding artificial intelligence in library and information science exhibits a unique scholarly footprint, with Altmetric Attention Scores demonstrating a complementary, yet distinct, value proposition compared to traditional citation metrics [84]. While traditional citations capture long-term scholarly influence, altmetrics provide immediate insights into public engagement and the broader societal dissemination of AI-integrated information resource management research [85]. This shift toward algorithmic information management necessitates a critical evaluation of how libraries transition from traditional manual curation to automated, machine-driven decision-making processes [86].



Fig 3: AI in Library and Information Science: Research Impact & Transformation

This transition demands that libraries navigate significant implementation hurdles, including the mitigation of algorithmic bias, the preservation of patron privacy, and the maintenance of institutional ethical standards [87]. Furthermore, the integration of AI-enabled Research Information Management Systems offers a transformative mechanism to optimize metadata accuracy and research visibility, though it necessitates robust data standardization protocols to address the inherent challenges of disparate infrastructures [88,89]. In this context, the shift toward algorithmic management fundamentally redefines service delivery by moving from passive repository maintenance to proactive, personalized user assistance, leveraging predictive analytics to anticipate user information needs before explicit queries are formulated.



However, this transition requires librarians to exercise significant professional judgment, ensuring that automated systems remain transparent and aligned with established ethical frameworks[90]. Such implementation, however, remains hindered by the current misalignment between the rapid pace of technological deployment and the limited capacity of academic institutions to regulate these tools with appropriate oversight [91]. Consequently, bridging this gap requires systematic curricula re-training for LIS professionals to ensure they possess the technical literacy to audit AI decision-making processes and uphold data privacy standards [92]. Ultimately, libraries must move beyond mere adoption by fostering algorithmic literacy, which allows staff to critically evaluate the efficacy and inherent biases of the models they deploy [93, p. 9]. By cultivating a deeper understanding of these technologies, librarians can act as critical mediators who ensure that automated systems prioritize equitable access and counteract the structural exclusionary practices embedded in algorithmic design [94, 95].

CONCLUSION

The current bibliometric landscape highlights a rapid proliferation of AI-integrated research within library and information science, yet it remains constrained by data siloing and the inconsistent reporting of algorithmic performance metrics across regional databases. Moreover, the current reliance on standardized bibliometric datasets often fails to account for non-traditional academic outputs, thereby obscuring the practical implementation gap between theoretical research and frontline LIS service models. Future research trajectories must therefore prioritize the development of longitudinal impact studies that evaluate the ethical and operational outcomes of AI deployment beyond initial technical adoption. Additionally, scholars should investigate the integration of augmented reality and predictive analytics to determine how these emerging interfaces redefine user engagement beyond current automation standards. Furthermore, establishing comparative frameworks between academic and public library sectors will be essential to address the unique challenges of equitable access and cost-effectiveness in diverse institutional settings. Finally, research must explicitly address the pedagogical fragmentation in current educational curricula to bridge the existing gap between technical training and critical AI literacy.

REFERENCES

- [1] M. N. Islam and G. Hu, "Trends and Patterns of Artificial Intelligence Research in Libraries: A Bibliometric Analysis," *SAGE Open*, vol. 15, no. 2, Apr. 2025, doi: 10.1177/21582440251327528.
- [2] A. Hussain and S. Ahmad, "Mapping the Literature on Artificial Intelligence in Academic Libraries: A Bibliometrics Approach," *Science & Technology Libraries*, vol. 43, no. 2, pp. 131–146, Aug. 2023, doi: 10.1080/0194262x.2023.2238198.
- [3] P. Vasishta, N. Dhingra, and S. Vasishta, "Application of artificial intelligence in libraries: a bibliometric analysis and visualisation of research activities," *Library Hi Tech*, vol. 43, pp. 693–710, Jan. 2024, doi: 10.1108/lht-12-2023-0589.
- [4] D. J. Borgohain, R. K. Bhardwaj, and M. K. Verma, "Mapping the literature on the application of artificial intelligence in libraries (AAIL): a scientometric analysis," *Library Hi Tech*, vol. 42, no. 1, pp. 149–179, Sep. 2022, doi: 10.1108/lht-07-2022-0331.
- [5] B. Peng and C. Li, "Artificial intelligence in digital media, humanities, and information science: a multidimensional analysis of research trends and user perceptions," *Humanities and Social Sciences Communications*, vol. 13, no. 1, Dec. 2025, doi: 10.1057/s41599-025-06372-9.
- [6] M. N. Islam *et al.*, "Application of artificial intelligence in academic libraries: a bibliometric analysis and knowledge mapping," *Discover Artificial Intelligence*, vol. 5, no. 1, May 2025, doi: 10.1007/s44163-025-00295-9.
- [7] P. K. Kalita, M. Barman, A. Chetia, P. Goyary, and K. Kumari, "Mapping the Landscape of Literature on Use of AI in Libraries: A Bibliometric Analysis Using Scopus Database," *Indian Journal of Information Sources and Services*, vol. 14, no. 2, pp. 24–27, Jun. 2024, doi: 10.51983/ijiss-2024.14.2.04.



- [8] Md. T. B. Aziz, "Bibliometric assessment of artificial intelligence applications in libraries," *International Journal of Information and Knowledge Studies* , vol. 5, no. 1, Jan. 2026, doi: 10.54857/g9cn1092.
- [9] B. Patil and G. Anandhalli, "Exploring Authorship Patterns in Artificial Intelligence Literature in Library Science: A Bibliometric Analysis-," *Second International Conference on Science & Technology Metrics* , vol. 5, no. 3, pp. 89–98, Dec. 2024, doi: 10.6025/jstm/2024/5/3/89-98.
- [10] P. Kulkanjanapiban, T. Silwattananusarn, and M. Lambovska, "Research on AI-driven innovations and services in academic libraries: A bibliometric and systematic literature review," *Journal of Data and Information Science* , vol. 10, no. 4, pp. 146–196, Jun. 2025, doi: 10.2478/jdis-2025-0036.
- [11] A. Vélez-Estévez, P. García-Sánchez, J. A. Moral-Muñoz, and M. J. Cobo, "Why do papers from international collaborations get more citations? A bibliometric analysis of Library and Information Science papers," *Scientometrics* , vol. 127, no. 12, pp. 7517–7555, Aug. 2022, doi: 10.1007/s11192-022-04486-4.
- [12] C. Wu, J. Zou, S. Wang, B. Sun, and J. Zhang, "Bibliometric Study and Visualization Analysis of Domestic and International Information Literacy Research in the Era of Artificial Intelligence," *International Journal of Librarianship* , vol. 9, no. 3, pp. 3–23, Sep. 2024, doi: 10.23974/ijol.2024.vol9.3.408.
- [13] C. N. L. -, L. N. M. -, A. M. -, and K.- Nicholas, "Integration of Artificial Intelligence Tools in Libraries 2012-2023: A Bibliometric Assessment," *International Journal For Multidisciplinary Research* , vol. 6, no. 4, Aug. 2024, doi: 10.36948/ijfmr.2024.v06i04.25168.
- [14] U. I. N. S. U. Medan, R. Restiana, R. Sayekti, and U. I. N. S. U. Medan, "Memahami Tren Penelitian Artificial Intelligence di Perpustakaan Melalui Analisis Bibliometrik Pada Publikasi Ilmiah Internasional Tahun 2019-2023," *UNILIB Jurnal Perpustakaan* , vol. 14, no. 2, Aug. 2023, doi: 10.20885/unilib.vol14.iss2.art2.
- [15] Y. Bu, C. S. Lee, D. Wang, and A. Morishima, "Guest editorial: Application of artificial intelligence in information services: part 2," *The Electronic Library* , vol. 44, no. 1, pp. 1–3, Feb. 2026, doi: 10.1108/el-02-2026-395.
- [16] M. Esh, "Artificial Intelligence in Libraries," *DESIDOC Journal of Library & Information Technology* , vol. 45, no. 1, pp. 51–56, Jan. 2025, doi: 10.14429/djlit.20309.
- [17] R. Sargunapathi and J. Ramalingam, "Authorship and Collaborative Pattern in the Field of Artificial Intelligence in Academic Libraries," in *Advances in library and information science (ALIS) book series* , SAGE Publishing, 2025, pp. 269–290. doi: 10.4018/979-8-3693-5807-8.ch012.
- [18] M. Q. Shormani, "What fifty-one years of linguistics and artificial intelligence research tell us about their correlation: A scientometric analysis," *Artificial Intelligence Review* , vol. 58, no. 12, Oct. 2025, doi: 10.1007/s10462-025-11332-5.
- [19] E. Ríos and A. T. Altamirano, "Análisis bibliométrico sobre inteligencia artificial en el campo de la bibliotecología: 2020-2024," *Revista Ibero-Americana de Ciência da Informação* , vol. 18, no. 1, pp. 178–189, Mar. 2025, doi: 10.26512/rici.v18.n1.2025.56844.
- [20] M. Dora, L. N. Zala, and M. Kumar, "Research on Artificial Intelligence and its Application in Libraries and Librarianship: a Content Analysis," in *Advances in economics, business and management research/Advances in Economics, Business and Management Research* , Atlantis Press, 2025, pp. 226–236. doi: 10.2991/978-94-6463-712-0_19.
- [21] D. Honcharov, "Thematic Structure of the Stream of Foreign Articles on the use of Artificial Intelligence Technologies in the Library and Information Field: 2019–2023," *Visnyk of Kharkiv State Academy of Culture* , no. 65, pp. 37–52, Jun. 2024, doi: 10.31516/2410-5333.065.03.
- [22] K. M. Concha, F. P. Zenteno, and J. T. Alfaro, "Use of artificial intelligence in libraries a systematic review, 2019-2023," *South African Journal of Libraries and Information Science* , Jan. 2024, doi: 10.7553/90-2-2387.



- [23] A. Lepcha, P. Buragohain, M. K. Singh, and A. Rai, "Global Trends and Future Prospects in Research Support Services," *DESIDOC Journal of Library & Information Technology* , vol. 45, no. 4, pp. 251–258, Jul. 2025, doi: 10.14429/djlit.21025.
- [24] S. Shehjar, "Mapping the Knowledge Domain of Library and Information Science: A Bibliometric Visualization through Performance analysis and Science mapping," *International Journal of Research Publication and Reviews* , vol. 6, no. 11, pp. 9371–9386, Nov. 2025, doi: 10.55248/gengpi.06.1125.4014.
- [25] F. Wang, "Analysis of the Research Status in the International Information Science Field in the Past Decade," *Voice of the Publisher* , vol. 10, no. 3, pp. 251–267, Jan. 2024, doi: 10.4236/vp.2024.103021.
- [26] H. A. Daqal, M. K. J. A. Sani, A. N. Mohamad, and A. H. Alahdal, "A bibliometric analysis of perceived innovativeness and value of digital library services in enhancing academic research productivity," *Information Services & Use* , vol. 45, pp. 167–187, Nov. 2025, doi: 10.1177/18758789261434340.
- [27] F. A. Santosa, "Artificial Intelligence in Library Studies," *JLIS it* , vol. 16, no. 1, pp. 61–71, Jan. 2025, doi: 10.36253/jlis.it-626.
- [28] G. Yang, L. Chen, and L. Chen, "An empirical study on Artificial intelligence in Chinese Library," in *Advances in intelligent systems research/Advances in Intelligent Systems Research* , Atlantis Press, 2024, pp. 332–340. doi: 10.2991/978-94-6463-417-4_30.
- [29] M. M. Mariani, I. Machado, and S. Nambisan, "Types of innovation and artificial intelligence: A systematic quantitative literature review and research agenda," *CentAUR (University of Reading)* , vol. 155, pp. 113364–113364, Nov. 2022, doi: 10.1016/j.jbusres.2022.113364.
- [30] H. R. Saeidnia, E. Hosseini, S. Abdoli, and M. Ausloos, "Unleashing the power of AI: a systematic review of cutting-edge techniques in AI-enhanced scientometrics, webometrics and bibliometrics," *arXiv (Cornell University)* , vol. 43, pp. 1292–1314, Feb. 2024, doi: 10.1108/lht-10-2023-0514.
- [31] D. Avello and S. Zurita, "Exploring the nexus of academic integrity and artificial intelligence in higher education: a bibliometric analysis," *International Journal for Educational Integrity* , vol. 21, no. 1, Aug. 2025, doi: 10.1007/s40979-025-00199-2.
- [32] D. Cardona, S. Cardona-Acevedo, A. Valencia-Arias, O. Pérez-Delgado, and M. Pinella-Vega, "Bibliometric analysis of the application of artificial intelligence techniques in bacteriology: a PRISMA-guided research agenda," *Frontiers in Microbiology* , vol. 16, pp. 1641967–1641967, Sep. 2025, doi: 10.3389/fmicb.2025.1641967.
- [33] M. Kaur and M. Saini, "Role of Artificial Intelligence in the crime prediction and pattern analysis studies published over the last decade: a scientometric analysis," *Artificial Intelligence Review* , vol. 57, no. 8, Jul. 2024, doi: 10.1007/s10462-024-10823-1.
- [34] A. Rahman, A. Raj, P. Tomy, and M. S. Hameed, "A comprehensive bibliometric and content analysis of artificial intelligence in language learning: tracing between the years 2017 and 2023," *Artificial Intelligence Review* , vol. 57, no. 4, Apr. 2024, doi: 10.1007/s10462-023-10643-9.
- [35] R. Zhang *et al.* , "A bibliometric review of deep learning in crop monitoring: trends, challenges, and future perspectives," *Frontiers in Artificial Intelligence* , vol. 8, pp. 1636898–1636898, Sep. 2025, doi: 10.3389/frai.2025.1636898.
- [36] M. Madhusudhan, P. Pandey, and R. E. Koren, "AI in libraries: a descriptive and thematic review of applications and innovations," *Global Knowledge Memory and Communication* , pp. 1–26, Nov. 2025, doi: 10.1108/gkmc-08-2024-0488.
- [37] M. Damar, J. K. Pal, T. G. M. Dhar, J. Haines, and G. Özdağoglu, "Visualizing intellectual patterns in LIS research: A bibliometric mapping based on major LIS journals that are intersecting with computer science," *Collnet Journal of Scientometrics and Information Management* , vol. 18, no. 2, pp. 179–196, Jan. 2024, doi: 10.47974/cjsim-2023-0103.
- [38] A. Bonkra, S. Pathak, A. Kaur, and M. A. Shah, "Exploring the trend of recognizing apple leaf disease detection through machine learning: a comprehensive analysis using bibliometric



- techniques,” *Artificial Intelligence Review* , vol. 57, no. 2, Jan. 2024, doi: 10.1007/s10462-023-10628-8.
- [39] S. Kumar, W. M. Lim, U. Sivarajah, and J. Kaur, “Artificial Intelligence and Blockchain Integration in Business: Trends from a Bibliometric-Content Analysis,” *Information Systems Frontiers* , vol. 25, no. 2, pp. 871–896, Apr. 2022, doi: 10.1007/s10796-022-10279-0.
- [40] C. Wang, X. Chen, T. Yu, Y. Liu, and Y. Jing, “Education reform and change driven by digital technology: a bibliometric study from a global perspective,” *Humanities and Social Sciences Communications* , vol. 11, no. 1, Feb. 2024, doi: 10.1057/s41599-024-02717-y.
- [41] J. Zhou, Y. Zhang, and Y. Qiu, “State-of-the-art review of machine learning and optimization algorithms applications in environmental effects of blasting,” *Artificial Intelligence Review* , vol. 57, no. 1, Jan. 2024, doi: 10.1007/s10462-023-10636-8.
- [42] Y. Wu, “Mapping the research landscape of artificial intelligence for knowledge discovery in innovation research,” *Information Research an international electronic journal* , vol. 31, no. 1, pp. 288–311, Jan. 2026, doi: 10.47989/ir31152435.
- [43] M. Elahi, S. O. Afolaranmi, J. L. M. Lastra, and J. A. P. García, “A comprehensive literature review of the applications of AI techniques through the lifecycle of industrial equipment,” *Investigo Institutional repository of UVigo (Universidade de Vigo)* , vol. 3, no. 1, Dec. 2023, doi: 10.1007/s44163-023-00089-x.
- [44] M. Jrad, “A Role of Artificial Intelligence in the Context of Economy: Bibliometric Analysis and Systematic Literature Review,” *International Journal of Membrane Science and Technology* , vol. 10, no. 3, pp. 1563–1586, Aug. 2023, doi: 10.15379/ijmst.v10i3.1756.
- [45] M. R. M. Salem and S. Shahimi, “A comprehensive analysis of FinTech (1968–2025): a bibliometric approach,” *Future Business Journal* , vol. 11, no. 1, Sep. 2025, doi: 10.1186/s43093-025-00652-1.
- [46] A. Khazzar, Y. Sekaki, Y. Lachhab, and S. El-marzouki, “Artificial Intelligence in Port Logistics: A Bibliometric Analysis of Technological Integration and Research Dynamics,” Oct. 08, 2025, doi: 10.48550/arxiv.2510.06556.
- [47] A. Khanna, S. Sarasan, and M. P. Sunil, “Navigating the AI revolution in customer service: a bibliometric analysis,” *Spanish Journal of Marketing - ESIC* , Aug. 2025, doi: 10.1108/sjme-08-2024-0228.
- [48] Y. Zhang, M. Wu, G. Y. Tian, G. Zhang, and J. Lü, “Ethics and privacy of artificial intelligence: Understandings from bibliometrics,” *Knowledge-Based Systems* , vol. 222, pp. 106994–106994, Apr. 2021, doi: 10.1016/j.knosys.2021.106994.
- [49] Y.-S. Xu, Y. I. A. M. Khalid, and M. S. S. Kassim, “How Do AI Technologies Augment Intelligent Information Services in Libraries? A Deep Learning-Based Topic Modeling and Temporal Analysis,” *Education for Information* , vol. 42, no. 1, pp. 59–83, Aug. 2025, doi: 10.1177/01678329251374501.
- [50] T. Tupan, “Perkembangan Penelitian Penggunaan Artificial Intelligence di Perpustakaan Berbasis Data Scopus,” *Media Pustakawan* , vol. 31, no. 3, pp. 277–290, Dec. 2024, doi: 10.37014/medpus.v31i3.5316.
- [51] S. A. ASLAN, Y. E. TURGUT, A. Aslan, and Ö. Özyurt, “Unveiling 50 years of librarianship research: An innovative study using unsupervised AI techniques,” *Journal of Librarianship and Information Science* , Nov. 2025, doi: 10.1177/09610006251388100.
- [52] R. Khan, N. Gupta, A. Sinhababu, and R. Chakravarty, “Impact of Conversational and Generative AI Systems on Libraries: A Use Case Large Language Model (LLM),” *Science & Technology Libraries* , vol. 43, no. 4, pp. 319–333, Sep. 2023, doi: 10.1080/0194262x.2023.2254814.
- [53] subhodip bid, R. Verma, and M. Joshi, “Publications pattern of Artificial Intelligence research papers in the context of Library and Information Science,” pp. 246–259, Jan. 2024, doi: 10.6025/stm/2024/5/246-259.
- [54] D. K. W. Chiu and K. K. W. Ho, “Editorial: Special selection on current bibliometrics and reviews,” *Library Hi Tech* , vol. 42, no. 1, pp. 1–7, Feb. 2024, doi: 10.1108/lht-02-2024-591.



- [55] R. Nizam Ach., S. Faila Arina, R. Munawwarah Madinatul, and M. Verry, “Artificial Intelligence In Academic Libraries: A Systematic Literature Review Of Applications, Challenges, And Trends (2019-2025),” *Research Repository Universitas Islam Negeri Maulana Malik Ibrahim (University of Southampton)* , Oct. 2025, Accessed: Feb. 2026. [Online]. Available: <https://orcid.org/0009-0005-8134-4044>
- [56] M. Peruchini, G. M. da Silva, and J. M. Teixeira, “Between artificial intelligence and customer experience: a literature review on the intersection,” *Discover Artificial Intelligence* , vol. 4, no. 1, Jan. 2024, doi: 10.1007/s44163-024-00105-8.
- [57] Dr. V. S. Velmurugan, “Today’s Library and Information Science Applications Utilize Artificial Intelligence,” *Innovation in Science and Technology* , vol. 4, no. 11, pp. 27–34, Feb. 2026, doi: 10.63593/ist.2788-7030.2025.12.005.
- [58] M. Sathiya and V. Monappa, “Exploring the Transformative Impact of Artificial Intelligence on Research Library Management,” in *Advances in library and information science (ALIS) book series* , SAGE Publishing, 2024, pp. 63–71. doi: 10.4018/979-8-3693-5593-0.ch005.
- [59] Dr. G. K. Jaiswal, “Infusing Artificial Intelligence For Transformative Impact In Academic Libraries: A Technical Perspective,” *Zenodo (CERN European Organization for Nuclear Research)* , Jan. 2026, doi: 10.5281/zenodo.18740818.
- [60] Dr. G. K. Jaiswal, “Infusing Artificial Intelligence For Transformative Impact In Academic Libraries: A Technical Perspective,” *Zenodo (CERN European Organization for Nuclear Research)* , Jan. 2026, doi: 10.5281/zenodo.18740817.
- [61] J. He and W. Lou, “How Disciplinary Partnerships Shape Research Landscape in U.S. Library and Information Science Schools,” Jan. 28, 2026, *Cornell University* . doi: 10.48550/arxiv.2601.20806.
- [62] S. Priya and R. Ramya, “Future Trends and Emerging Technologies in AI and Libraries,” in *Advances in library and information science (ALIS) book series* , SAGE Publishing, 2024, pp. 245–271. doi: 10.4018/979-8-3693-1573-6.ch010.
- [63] P. A. Nugroho, N. E. V. Anna, and N. Ismail, “The shift in research trends related to artificial intelligence in library repositories during the coronavirus pandemic,” *Library Hi Tech* , Apr. 2023, doi: 10.1108/lht-07-2022-0326.
- [64] A. P. Narendra, C. Dewi, L. S. Gunawan, and A. S. Ardi, “Artificial Intelligence Implementation in Library Information Systems: Current Trends and Future Studies,” *Vietnam Journal of Computer Science* , vol. 12, no. 3, pp. 209–233, Jan. 2025, doi: 10.1142/s2196888824300023.
- [65] G. K. Awal and U. Tehlan, “Mapping the research landscape of recommender systems for digital libraries,” *Record and Library Journal* , vol. 10, no. 1, pp. 180–194, Jun. 2024, doi: 10.20473/rj.v10-i1.2024.180-194.
- [66] Y.-S. Xu, Y. I. A. M. Khalid, and M. S. S. Kassim, “Is the intelligent development of libraries accelerating? A decade of comprehensive scientometric assessment and SWOT analysis,” *Journal of Librarianship and Information Science* , Nov. 2025, doi: 10.1177/09610006251384336.
- [67] M. S. Rajeevan, B. M. Devi, V. S. Anoop, and C. Mallikarjuna, “Mapping of Emerging Technological Trends in Library and Information Science,” *DESIDOC Journal of Library & Information Technology* , vol. 45, no. 4, pp. 326–338, Jul. 2025, doi: 10.14429/djlit.21029.
- [68] J. He and W. Lou, “How Disciplinary Partnerships Shape Research Landscape in U.S. Library and Information Science Schools,” *ArXiv.org* , Jan. 2026, Accessed: Feb. 2026. [Online]. Available: <http://arxiv.org/abs/2601.20806>
- [69] U. Y. Shah and S. Gul, “Smart libraries: Unveiling research trends and knowledge dynamics through scientometrics,” *Journal of Librarianship and Information Science* , vol. 58, no. 1, pp. 395–407, Feb. 2025, doi: 10.1177/09610006251316594.
- [70] P. Wattanasiri, P. Manorom, and W. Chansanam, “Influence and collaboration in library and information science research: A university perspective,” *Iberoamerican Journal of Science Measurement and Communication* , vol. 4, no. 3, pp. 1–14, Nov. 2024, doi: 10.47909/ijsmc.153.



- [71] P. Wattanasiri, P. Manorom, and W. Chansanam, "Emerging Themes, Leaders, and Collaboration in Library and Information Science Research," *Data & Metadata* , vol. 4, pp. 497–497, Nov. 2024, doi: 10.56294/dm2025497.
- [72] S. You, S. Joo, and M. Katsurai, "Data mining topics in the discipline of library and information science: analysis of influential terms and Dirichlet multinomial regression topic model," *Aslib Journal of Information Management* , vol. 76, no. 1, pp. 65–85, Dec. 2022, doi: 10.1108/ajim-05-2022-0260.
- [73] A. Kalisdha, "The Impact of Artificial Intelligence and Machine Learning in Library and Information Science," *International Journal of Research in Library Science* , vol. 10, no. 1, pp. 39–58, Feb. 2024, doi: 10.26761/ijrls.10.1.2024.1733.
- [74] A. A. Adewojo and A. O. Dunmade, "From big data to intelligent libraries: Leveraging analytics for enhanced user experiences," *Business Information Review* , vol. 41, no. 3, pp. 104–109, Jun. 2024, doi: 10.1177/02663821241264707.
- [75] E. A. Abanga and T. Acquah, "A Bibliometric Analysis of Global Research Trends in Artificial Intelligence from 2019 to 2023," *Asian Journal of Research in Computer Science* , vol. 17, no. 12, pp. 220–233, Dec. 2024, doi: 10.9734/ajrcos/2024/v17i12540.
- [76] S. Ansari and I. N. Qamari, "Artificial intelligence and students' cognitive learning outcomes with bibliometric and content analysis for future research agenda," *Discover Education* , vol. 4, no. 1, Oct. 2025, doi: 10.1007/s44217-025-00865-0.
- [77] P. Wattanasiri, P. Manorom, and W. Chansanam, "Analyzing Global Trends and Collaborations in Library and Information Science Research: A Bibliometric and Social Network Analysis Perspective," *International Research Journal of Multidisciplinary Scope* , vol. 5, no. 4, pp. 117–130, Jan. 2024, doi: 10.47857/irjms.2024.05i04.01229.
- [78] X. Chen, H. Xie, X. Tao, F. L. Wang, M. Leng, and B. Lei, "Artificial intelligence and multimodal data fusion for smart healthcare: topic modeling and bibliometrics," *Artificial Intelligence Review* , vol. 57, no. 4, Mar. 2024, doi: 10.1007/s10462-024-10712-7.
- [79] J. Shi, D. Bendig, H. C. Vollmar, and P. Rasche, "Mapping the Bibliometrics Landscape of AI in Medicine: Methodological Study," *Journal of Medical Internet Research* , vol. 25, Sep. 2023, doi: 10.2196/45815.
- [80] K. Kavitha, V. P. Joshith, N. P. Rajeev, and S. Asha, "Artificial Intelligence in Higher Education: A Bibliometric Approach," *European Journal of Educational Research* , pp. 1121–1137, Apr. 2024, doi: 10.12973/eu-jer.13.3.1121.
- [81] K. P. J. Mukthar, N. Chauhan, M. S. M. Al-Absy, R. Kumar, N. R. Gupta, and S. Gokilavani, "Research dynamics in AI and fintech: a bibliometric investigation using R," *Discover Internet of Things* , vol. 5, no. 1, Mar. 2025, doi: 10.1007/s43926-025-00111-x.
- [82] M. Barré, A. H. Elmi, I. H. Mohamud, Z. A. Warsame, and A. A. Mohamed, "AI in the Era of Climate Change: Unveiling Patterns and Trends Through Bibliometric Analysis," *International Journal of Sustainable Development and Planning* , vol. 19, no. 11, pp. 4219–4225, Nov. 2024, doi: 10.18280/ijstdp.191111.
- [83] T. T. Choji, M. J. Cobo, and J. A. Moral-Muñoz, "Is the scientific impact of the LIS themes gender-biased? A bibliometric analysis of the evolution, scientific impact, and relative contribution by gender from 2007 to 2022," *Scientometrics* , vol. 129, no. 10, pp. 6023–6047, Apr. 2024, doi: 10.1007/s11192-024-05005-3.
- [84] G. B. Shelke and V. U. Baphe, "Artificial Intelligence in Library and Information Science Literature: An Altmetrics Analysis," *Journal of Environmental Science and Pollution Research* , vol. 12, no. 2, pp. 569–569, Mar. 2026, doi: 10.30799/jespr.s05.26120205.
- [85] X. Wang, D. Shi, and K. Shehzadi, "A bibliometric and altmetric analysis of global research on AI-empowering information resource management," *Information Development* , Jul. 2025, doi: 10.1177/02666669251357947.



- [86] M. H. Arsalan, O. Mubin, A. A. Mahmud, I. A. Khan, and A. Hassan, "Mapping Data-Driven Research Impact Science: The Role of Machine Learning and Artificial Intelligence," *Metrics* , vol. 2, no. 2, pp. 5–5, Apr. 2025, doi: 10.3390/metrics2020005.
- [87] C. K. G. -, "Impact of Artificial Intelligence (AI) in Library Services," *International Journal For Multidisciplinary Research* , vol. 6, no. 3, Jun. 2024, doi: 10.36948/ijfmr.2024.v06i03.22452.
- [88] A. S. K. and S. H. T., "AI-Integrated Research Information Management: A Comparative Institutional Analysis," *International Journal of Innovative Science and Research Technology (IJISRT)* , pp. 3341–3341, Mar. 2026, doi: 10.38124/ijisrt/25aug243.
- [89] B. Edmund, B. 1964- Leda, C. 1959- Andrew M., U. Raymond, and S. Verlag K. G. ., *New Horizons in Artificial Intelligence in Libraries* . 2024. doi: 10.1515/9783111336435.
- [90] T. Yaroshenko and O. Ярошенко, "Artificial Intelligence (AI) for Research Lifecycle: Challenges and Opportunities," *UNIVERSITY LIBRARY AT A NEW STAGE OF SOCIAL COMMUNICATIONS DEVELOPMENT CONFERENCE PROCEEDINGS* , no. 8, pp. 194–201, Dec. 2023, doi: 10.15802/unilib/2023_294639.
- [91] N. M. T. Sousa, "Ethical and practical implications of AI in academic library research," *IFLA Journal* , Nov. 2025, doi: 10.1177/03400352251391753.
- [92] M. Bairagi and S. R. Lihitkar, "Empowering Research Workflows and Information Retrieval in Academic Libraries through AI Tools," in *Advances in economics, business and management research/Advances in Economics, Business and Management Research* , Atlantis Press, 2025, pp. 65–77. doi: 10.2991/978-94-6463-712-0_6.
- [93] M. Ridley and D. Pawlick-Potts, "Algorithmic Literacy and the Role for Libraries," *Information Technology and Libraries* , vol. 40, no. 2, Jun. 2021, doi: 10.6017/ital.v40i2.12963.
- [94] N. M. T. Sousa, "Academic libraries as hubs of artificial intelligence competency," *Discover Artificial Intelligence* , vol. 5, no. 1, Aug. 2025, doi: 10.1007/s44163-025-00490-8.
- [95] P. D. Hanchate and A. R. Ghodake, "AI Literacy among Librarians: A Conceptual Framework for Preparedness in an AI-Driven Information Environment," *Zenodo (CERN European Organization for Nuclear Research)* , Feb. 2026, doi: 10.5281/zenodo.19145599.
- [96] C. Mallikarjuna, "Integrating Artificial Intelligence in Academic Libraries," *DESIDOC Journal of Library & Information Technology* , vol. 44, no. 2, pp. 124–129, Apr. 2024, doi: 10.14429/djlit.44.2.18958.