

Role and Responsibilities of Library Professionals in the Artificial Intelligence Era: An Indian Academic Perspective

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ABSTRACT

Artificial Intelligence (AI) is rapidly changing the environment of higher education and academic libraries in India. The emergence of generative AI, machine learning, natural language processing, automated discovery systems, chatbots, and AI-assisted research tools is transforming the ways in which information is created, accessed, evaluated, organized, and used. In this changing environment, library professionals are required to move beyond their traditional responsibilities of collection development, cataloguing, reference service, and information provision. They increasingly need to function as AI-literate educators, research-support specialists, information evaluators, digital scholarship partners, and ethical advisers. This article examines the changing role and responsibilities of library professionals in the Artificial Intelligence era from an Indian academic perspective. Particular attention is given to AI literacy, information literacy, research support, scholarly communication, copyright, privacy, academic integrity, digital inclusion, professional development, and institutional AI policy. The article also considers the relevance of India's National Education Policy (NEP) 2020 and the IndiaAI Mission to academic library services. Recent Indian studies indicate growing interest in AI adoption among library professionals and users, but they also reveal challenges associated with skills, infrastructure, training, funding, ethics, and governance. The article argues that AI should be viewed not as a replacement for librarians but as a technology that can strengthen human-centered library services. The future of Indian academic librarianship will depend on responsible AI adoption, continuous professional learning, collaboration, and preservation of the core values of librarianship.

Keywords: Artificial Intelligence, Academic Libraries, Library Professionals, India, AI Literacy, Information Literacy, Research Support, Generative AI, Academic Integrity, Digital Libraries

INTRODUCTION:

Artificial Intelligence has become one of the most significant technological developments influencing higher education, research, and knowledge institutions. AI applications are increasingly visible in information retrieval, recommendation systems, automated classification, reference services, research analytics, content generation, translation, and scholarly communication. Academic libraries, which have historically adopted emerging technologies to improve access to knowledge, are naturally becoming an important part of this transformation.

In India, the development of AI must be understood within the broader transformation of higher education. The National Education Policy (NEP) 2020 emphasizes the effective use of educational technology, development of digital resources, research and innovation, and preparation of learners for a technologically changing world (Ministry of Education, 2020). The policy also recognizes the importance of disruptive technologies and encourages higher educational institutions to participate in research, teaching, and skill development related to emerging technologies.

The Government of India's IndiaAI Mission, approved in March 2024, further demonstrates the national importance of AI. The mission includes public AI infrastructure, indigenous AI capabilities, AI education and skills, datasets, innovation, and a specific focus on "Safe & Trusted AI" (Office of the Principal Scientific

Adviser to the Government of India, 2026). These developments have direct implications for universities and their libraries.

Academic libraries are no longer simply physical spaces containing books and journals. They are increasingly digital knowledge environments that support teaching, learning, research, data management, scholarly communication, open access, and digital scholarship. AI adds another layer to these responsibilities. The challenge is therefore to identify what librarians should do differently while ensuring that the values of accuracy, intellectual freedom, privacy, equity, and responsible access to information are not compromised.

Artificial Intelligence and Indian Academic Libraries:

AI can be applied at almost every stage of library work. In technical services, it can assist with metadata generation, classification, indexing, text extraction, and digitization. In user services, conversational systems can answer routine questions and guide users towards information resources. In collection development, data analysis can identify patterns of use and help librarians understand changing information needs. In research services, AI-enabled discovery tools can assist users in locating literature and identifying relationships between concepts.

A systematic review by Ayinde et al. (2026) found that AI applications in academic libraries can be grouped into technical services, reference and information services, administration and circulation, collection development, information literacy and user education, and professional development. Reference and information services were among the most prominent areas of application. The authors also identified funding, skills, training, and infrastructure as important challenges.

The Indian context is particularly significant because academic institutions differ greatly in terms of infrastructure, funding, staff capacity, language requirements, and digital maturity. A technologically advanced central university may have very different AI capabilities from a small rural college. Therefore, Indian librarianship requires an inclusive rather than technology-only model of AI adoption.

A 2024 study of LIS professionals in India found a positive orientation towards AI adoption and highlighted the importance of technical, analytical, and ethical competencies, while also identifying training, infrastructure, resource limitations, and ethical issues as concerns (Rajarshi et al., 2024). Similarly, Haris et al. (2025) examined 383 academic library users in India and found that educational level influenced AI knowledge, while users expressed both interest in and concerns about the use of AI in academic libraries.

These findings suggest that the Indian academic library community is moving from awareness of AI towards practical engagement, but this transition requires professional preparation.

Changing Role of Library Professionals:

Librarian as an AI-Literate Professional

The first major change is the need for AI literacy among library professionals. AI literacy involves understanding what AI can do, how AI systems produce outputs, how those outputs can fail, and how users can employ AI responsibly.

A librarian does not need to become a computer scientist, but should understand concepts such as generative AI, large language models, machine learning, prompting, algorithmic bias, hallucination, training data, data privacy, and AI-generated misinformation.

Miltenoff (2024) argues that academic librarians are particularly suitable participants in AI-literacy initiatives because they already possess experience in information literacy, research consultation, scholarly communication, copyright, data privacy, and ethical information practices.

For Indian academic librarians, AI literacy should also include awareness of multilingual information environments and inequalities in access to digital technologies.

Librarian as an AI and Information Literacy Educator

The traditional concept of information literacy must now expand to include AI literacy. Students increasingly use AI tools when preparing assignments, reviewing literature, generating ideas, translating text, and preparing research drafts. However, AI-generated responses can be inaccurate, biased, outdated, or unsupported.

Library professionals can provide structured AI-literacy programmes that teach students how to:

formulate effective prompts;

verify AI-generated claims;

identify fabricated references;

compare AI output with authoritative scholarly sources;

recognize bias and misinformation;

cite sources correctly;

understand copyright implications; and

use AI without compromising academic integrity.

Ali and Richardson (2025), in a scoping review of AI literacy guidelines and policies for academic libraries, emphasize the growing need to prepare both librarians and library users for responsible engagement with AI.

This role is particularly important in India because universities have students with very different levels of digital and academic experience. Librarians can help reduce the gap between students who are technologically confident and those who lack access, confidence, or critical evaluation skills.

Librarian as Research Support Specialist

Research support is another major area in which the librarian's role is changing. AI-assisted discovery systems can help researchers identify papers, topics, authors, concepts, and research trends. However, AI tools cannot replace the librarian's knowledge of authoritative databases, search strategies, controlled vocabularies, citation databases, subject resources, and scholarly publishing.

Library professionals should therefore support researchers in evaluating AI-enabled search results and returning to the original scholarly source before relying on information. They can provide assistance in systematic literature searching, citation management, research data management, bibliometrics, scholarly publishing, and open-access dissemination.

In the Indian context, this responsibility also aligns with university research repositories and scholarly infrastructures such as institutional repositories and the wider digital research ecosystem supported by INFLIBNET. UGC regulations also require higher educational institutions to support the preservation and dissemination of theses and dissertations through repositories such as Shodhganga (University Grants Commission [UGC], 2018).

Librarian as a Guardian of Academic Integrity

Generative AI creates new challenges for academic integrity. Students may use AI to generate assignments, paraphrase sources, or construct research text without understanding the underlying material. AI can also produce invented references and inaccurate quotations.

Indian higher education already has a strong regulatory basis for academic integrity. The UGC's Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions Regulations, 2018, applies to students, faculty, researchers, and staff in higher educational institutions.

Library professionals can contribute by educating users about plagiarism, citation, source attribution, responsible AI use, and the distinction between assistance and authorship. They can also work with faculty and research committees to develop practical AI-use guidelines.

The librarian's contribution should not be limited to detecting inappropriate AI use. A more valuable approach is preventive education: teaching students how to conduct original research, evaluate sources, document their methods, and acknowledge technological assistance responsibly.

Ethical Responsibilities of Library Professionals

Privacy and Data Protection

Privacy has always been an important value in librarianship. AI systems make this responsibility more complex because many platforms process prompts, documents, search histories, user behaviour, and other forms of information.

India's Digital Personal Data Protection Act, 2023 provides an important legal context for organisations handling digital personal data (Government of India, 2023). Academic libraries should therefore examine the privacy practices of AI vendors before integrating their systems.

Librarians should advise users not to place confidential research data, unpublished manuscripts, personal information, student records, or sensitive institutional documents into public AI systems without appropriate safeguards.

Copyright and Intellectual Property

AI also raises difficult questions about copyright and intellectual property. The Copyright Act, 1957 contains provisions relevant to educational and library activities, including specific exceptions concerning certain library preservation and research uses (Government of India, 1957).

Library professionals must therefore help academic users understand that access to a digital resource does not automatically mean unrestricted permission to copy, upload, reproduce, or process that resource through an external AI platform. Licensing agreements and institutional policies must also be considered.

Bias, Transparency, and Fairness

AI systems may reflect biases present in their data, design, or evaluation processes. An AI-based recommendation system may unintentionally favor certain languages, publishers, disciplines, or types of scholarship.

This issue is important in India because academic knowledge exists across many languages and cultural traditions. A library dependent entirely on English-language AI systems could unintentionally reinforce existing information inequalities.

Librarians should therefore ask whether AI tools are transparent, inclusive, accessible, and appropriate for the populations they serve. IFLA places emphasis on responsible AI in libraries, including issues of privacy, accountability, openness, and human-centered values (International Federation of Library Associations and Institutions [IFLA], n.d.).

Professional Development and New Competencies:

Professional development will be one of the most important responsibilities of libraries and library professionals. A librarian who does not understand AI may find it increasingly difficult to provide effective research and information services.

The emerging competency framework developed by the Association of College and Research Libraries (ACRL, 2025) reinforces the importance of AI-related skills for academic library workers, including ethical considerations and equitable access to AI literacy.

For Indian LIS professionals, continuing education should include practical training in:

generative AI and large language models;

AI-assisted research and discovery;

prompt formulation and evaluation;

AI ethics and responsible use;

copyright and data protection;

scholarly communication;

research data management; and

evaluation of AI-based library products.

Recent Indian research further shows that AI is becoming embedded in everyday library work. Subaveerapandiyan et al. (2026), studying 100 academic library professionals in India, found that AI was increasingly experienced not simply as a separate tool but as an infrastructural condition influencing workflows, decision-making, and professional practice.

This finding is important because it suggests that professional development cannot be a one-time workshop. AI competence needs to become a continuing component of professional identity.

AI and the Future of Indian Academic Libraries:

The future Indian academic library is likely to be a hybrid environment in which human expertise and AI-supported systems work together. AI may perform repetitive and computationally intensive tasks, while librarians focus on judgement, teaching, context, ethics, research consultation, and personalized services.

The Government of India's IndiaAI Mission provides an important national backdrop for this development. Its objectives include AI education and skills, public access to computational capacity, development of indigenous AI systems, and responsible AI governance. Academic libraries should engage with this ecosystem rather than remaining passive observers.

Indian universities should consider developing institutional AI policies in which librarians participate alongside faculty, researchers, information technology professionals, legal experts, and administrators. Such policies

should clearly address acceptable AI use, privacy, copyright, academic integrity, transparency, accessibility, procurement, and evaluation.

Libraries can also promote experimentation through AI laboratories, research-support units, workshops, seminars, and collaborative projects. However, adoption should be based on educational and research needs rather than technological novelty.

Major Challenges in India

Despite considerable opportunities, AI adoption faces several practical difficulties. The first is unequal infrastructure. Not every institution has reliable networks, modern hardware, sufficient budgets, or access to advanced databases and AI services.

The second challenge is the skills gap. Some librarians may have limited exposure to AI concepts, particularly where opportunities for continuing professional education are scarce. The 2024 Indian study by Rajarshi et al. highlighted the need for targeted training and infrastructure investment.

The third challenge is language and inclusivity. AI-supported services should not reinforce the dominance of a small number of languages at the expense of India's multilingual academic environment.

The fourth challenge is ethical governance. AI procurement should not be delegated entirely to vendors. Academic institutions must understand how systems process data, generate outputs, and make recommendations.

Finally, there is the challenge of professional anxiety. Some librarians may fear that automation will reduce the importance of traditional library roles. In reality, the evidence suggests a transformation rather than a simple disappearance of professional work. Human skills such as judgement, empathy, contextual interpretation, teaching, ethics, and scholarly communication remain difficult to automate.

CONCLUSION

Artificial Intelligence is creating a significant transformation in Indian academic libraries. The library professional of the AI era cannot remain limited to traditional functions. The professional must become an educator, researcher-support specialist, AI-literacy trainer, ethical adviser, data steward, and partner in digital scholarship. The Indian academic context makes this transformation particularly important because institutions vary widely in resources, infrastructure, student needs, and technological readiness. AI adoption therefore requires a balanced approach that combines innovation with inclusion, human judgement, academic integrity, privacy, copyright, and professional ethics. The responsibility of the library professional is ultimately not to compete with AI but to ensure that AI is used intelligently and responsibly. Librarians can help students and researchers understand both the possibilities and limitations of AI, verify information, protect personal data, respect intellectual property, and maintain scholarly standards. The future academic library in India should therefore be understood as a human-centred knowledge institution supported by intelligent technologies. Successful AI adoption will depend on continuous professional development, institutional policies, collaboration, ethical leadership, and commitment to equitable access to knowledge. In this environment, library professionals will remain essential—not because they control information, but because they help academic communities understand, evaluate, preserve, and use information responsibly.

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