International Journal of Information Resource Management (IJIRM)
Volume 3, Number 4 (October, 2026)
E- ISSN: 1118-7786

ARTIFICIAL INTELLIGENCE AS TOOL FOR ENHANCING KNOWLEDGE ACCESS AND INCLUSIVE LIBRARY SERVICES IN ACADEMIC LIBRARIES IN SELECTED NIGERIAN UNIVERSITIES

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Abstract

Artificial intelligence (AI) is reshaping academic libraries by improving how information is organised, retrieved, and shared with students and researchers. As digital content expands and users demand faster access to reliable resources, libraries are increasingly turning to AI to strengthen service delivery. This paper reviews the literature on AI as a tool for enhancing knowledge access and promoting inclusive library services in academic libraries, with particular reference to selected Nigerian universities. The review shows that technologies such as machine learning, natural language processing, intelligent discovery tools, and chatbots are gradually gaining relevance in library operations, helping librarians improve collection organisation, information retrieval, and real-time user assistance. These tools enable libraries to respond more effectively to the diverse information needs of their users, including persons with disabilities and other underserved groups. However, the review also reveals that AI adoption in many Nigerian academic libraries remains at an early stage, constrained by inadequate technological infrastructure, insufficient funding, and a shortage of professionals with the requisite technical expertise. Ethical concerns, particularly around data privacy and algorithmic bias, further complicate adoption. The paper argues that academic libraries in Nigeria stand to gain significantly from AI if these structural and ethical challenges are deliberately addressed, and it concludes with

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recommendations for infrastructure investment, staff training, and policy development to guide responsible AI adoption.
Keywords: Artificial Intelligence, Academic Libraries, Knowledge Access, Inclusive Services

Introduction

Academic libraries have always been closely tied to the core mission of the university, providing the academic community with reliable information that supports teaching, learning, and research. Students visit the library to consult textbooks, explore scholarly articles, and gather materials for assignments and independent study, while lecturers and researchers depend on it for previous studies, theoretical perspectives, and dependable evidence for their work. Beyond maintaining collections, librarians support the academic process by helping users navigate databases, identify credible sources, and build the skills needed for effective research. In recent years, many libraries have begun experimenting with emerging technologies, including artificial intelligence, as a way of improving how users locate and interact with information (Yoon, Andrews, & Ward, 2022), and this trend is increasingly visible in developing contexts where institutions are working to modernise their services (Adeyemi, Alabi, Okoro, & Musa, 2025). It is this writer's view that the pace of this experimentation, though still uneven, marks a genuine turning point in how academic libraries think about service delivery.

While early libraries were largely defined by print collections and manual cataloguing, today's academic environment demands a far more dynamic approach. Students and researchers now expect instant access to reliable information across a growing landscape of digital resources, and the sheer volume of scholarly content available

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online is reshaping how libraries operate, pushing them to rethink traditional practices to meet the changing needs of their users (Onunka, 2023). Artificial intelligence is emerging as one of the more powerful tools for this modernisation. Machine learning, natural language processing, intelligent discovery systems, and chatbots are no longer futuristic ideas but practical solutions that are already enhancing information organisation and retrieval; AI can anticipate user needs and guide researchers through complex digital collections (Gajbhiye, 2024), while the partnership between human librarians and AI machinery is increasingly seen as central to delivering more personalised and inclusive services (Jarrahi, Anderson, & Smith, 2023). In this writer's assessment, the real value of AI in libraries lies less in the technology itself than in what it frees librarians to do: spend more time on the complex, human-centred work that automation cannot replace.

In Nigeria, the adoption of AI in academic libraries is growing, albeit unevenly. Several universities have started exploring digital innovations to improve service delivery, yet infrastructural challenges, funding gaps, and limited technical expertise remain significant hurdles (Yusuf, Adebayo, & Bello, 2022). Librarians recognise the transformative potential of AI, but practical implementation often lags behind vision because of these systemic constraints (Akinola, 2023). This paper takes the position that Nigerian academic libraries cannot simply import global AI frameworks wholesale; rather, they must adapt insights from both global practice and local experience (Olan, Bello, & Adeyemi, 2022; Okunlaya, Syed Abdullah, & Alias, 2022) to their own realities of infrastructure and funding. Accordingly, this paper examines how AI can enhance

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knowledge access and foster inclusive library services in Nigerian universities, drawing on current literature to identify opportunities, challenges, and practical ways forward.

Artificial Intelligence

Artificial intelligence has gradually become one of the most current technological concepts shaping information environments. At its core, it refers to computer systems designed to perform tasks that traditionally require human intelligence, such as learning, reasoning, recognising patterns, and making decisions; these systems attempt to imitate cognitive processes by analysing data and generating outcomes that resemble human judgment. In simple terms, AI allows machines to "think," learn from experience, and improve their performance over time, generating knowledge, recognising patterns, and producing intelligent responses to complex problems (Kalota, 2024). It is worth stressing that AI is not a single technology but a broad family of tools and techniques that allow machines to simulate aspects of human thinking, a rapidly expanding field of computer science focused on building systems capable of adapting to changing environments and solving problems with minimal human intervention (Jiang, 2022).

Although artificial intelligence appears to be a recent phenomenon, its intellectual roots stretch back several decades to the mid-twentieth century, when researchers first explored the possibility of machines performing reasoning tasks similar to humans. Improvements in computing power, data availability, and algorithmic design have since transformed AI from a theoretical idea into a practical technological reality, evolving through several stages, from rule-based systems, to statistical learning models, to today's

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data-driven intelligence (Jiang, 2022). This gradual transformation has taken AI beyond laboratory experiments into real-world sectors such as education, healthcare, finance, and information management, and in the Nigerian context, its rise across various sectors reflects a broader global shift toward intelligent digital systems that enhance productivity and knowledge management (Adediran, 2024). To this writer, this trajectory suggests that libraries that delay engaging with AI risk being left behind not by choice but by default, as the technology continues to embed itself in adjacent sectors regardless.

Within information systems and knowledge environments specifically, AI technologies have become particularly important because they support the efficient organisation, retrieval, and interpretation of large volumes of information. Libraries and information centres increasingly rely on AI-driven systems to manage digital collections, assist users in locating materials, and improve access to knowledge resources; intelligent information systems can analyse large datasets and offer solutions to users, thereby improving the overall efficiency of information services (Huynh-The, 2023), and modern AI systems possess analytical capabilities that allow them to interpret complex information and assist professionals in decision-making (Varghese, 2024). These capabilities have gradually made AI an essential component of contemporary information infrastructure.

Several technologies drive the functionality of AI in information environments. Machine learning allows computers to learn from data and improve their performance without being explicitly programmed for every task, detecting patterns within large datasets to generate predictions or recommendations; this is why machine learning models are used extensively in fraud detection, data analysis, and predictive systems (Odufisan,

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2025). Natural language processing allows machines to understand and interpret human language, enabling them to analyse text, answer questions, and engage in conversational interactions with users, capabilities that matter greatly in information environments where users search for knowledge using natural language queries. Beyond these, AI also includes intelligent systems that support automated reasoning and decision-making, combining algorithms, data analysis, and computational intelligence to generate solutions or judgments; such systems are increasingly integrated into educational technologies to support learning analytics, adaptive content delivery, and automated assessment (Bali, 2024), while AI-driven decision systems more broadly are gaining attention in healthcare and information management for the speed and quality they bring to professional decision-making (Adigwe, 2024).

These technologies show that AI is more than a passing trend; it represents a fundamental shift in how information is processed and used. In knowledge institutions such as libraries, AI offers real potential to improve cataloguing, automate information retrieval, and deliver personalised services, reflecting a broader recognition of its ability to support teaching, learning, and knowledge dissemination in educational environments generally (Okunade, 2024). As digital information continues to expand, this writer holds that AI-driven systems will increasingly be not a luxury but a basic requirement for managing information ecosystems effectively.

Artificial Intelligence in Academic Libraries

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AI is quietly but steadily changing how students use libraries. Shelves, catalogue cards, and purely in-person service used to define the library space; it is now becoming a location that is more responsive and technologically driven, one that begins to anticipate what users want in ways that make searches easier and remove much of the friction that used to frustrate people looking for information. This shift is not only about acquiring new tools; it is about changing how libraries work altogether (Wheatley & Hervieux, 2019), producing a library that draws on both human expertise and machine intelligence (Cox, Pinfield, & Rutter, 2019). The clearest gains are visible in how materials are organised and catalogued. For a long time, librarians worked hard to group materials so that users could easily locate what they needed; AI tools are steadily easing this burden by reading materials quickly, spotting patterns, and generating labels, which frees librarians for more interesting work than routine classification (Vijayakumar & Sheshadri, 2019), even though maintaining consistent categories remains challenging even for specialists once datasets grow large (Huang, 2024). In this writer's view, this shift is best understood not as a reduction of the librarian's role but as a redistribution of it, away from repetitive tasks and toward more substantive engagement with users.

Smart discovery tools also make information easier to find. Users can now rely on technology that "understands" context and intent rather than requiring precise keywords, with AI-powered discovery platforms adjusting search results based on how each user behaves, making them more relevant to each person (Hussain & Ahmad, 2024) and turning the search experience into something closer to a conversation, which particularly benefits students who are not yet confident about how to phrase academic questions (Wheatley &

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Hervieux, 2019). Chatbots and virtual reference services are extending this same logic to everyday enquiries: instead of waiting in line or combing through library manuals, users can now ask questions and receive answers immediately, at any time of day, with these tools handling basic enquiries competently enough to free librarians for more complex research support (Cox, Pinfield, & Rutter, 2019). Nigerian institutions using such systems are beginning to see improvements in service delivery, even though the technology is still maturing locally (Yusuf, Adebayo, & Bello, 2022).

AI is also improving how digital repositories holding theses, dissertations, and other academic documents are managed. Where manual data entry used to be unavoidable, AI can now label and sort materials automatically, which makes retrieval easier, especially within large institutional and corporate databases (Misau, 2021), while also making scholarly work more openly available so that more people can access research produced locally, a meaningful gain given that African scholarship does not always receive the global recognition it deserves (Ogwo, Ibegbulem, & Nwachukwu, 2023). Automated circulation systems, supported by technologies such as RFID and AI-powered tracking, are similarly speeding up borrowing and returns, reducing errors and delays for both users and staff (Abayomi, Adenekan, & Abayomi, 2021), which in turn allows libraries to serve more users without compromising the quality of service (Ajani, Tella, Salawu, & Abdullahi, 2022).

None of this progress has come easily, particularly in Nigeria, where limited funding, inadequate infrastructure, and gaps in technical know-how continue to slow adoption, and many librarians are still learning how to fit these tools into their daily work (Eiriemiokhale & Sulyman, 2023). Deploying AI successfully demands more than acquiring technology; it

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requires people to adapt how they think and organisations willing to support that change (Akinola, 2023). Even so, it is this writer's assessment that Nigerian academic libraries are unmistakably becoming smarter, more attentive to what students need, and more attuned to their users generally, even if the pace of change remains gradual.

Knowledge Access in Academic Libraries

Knowledge access might fairly be described as the heartbeat of an academic library, since it captures how easily people can obtain the information that supports their study and research. In practice, simply owning books or subscribing to databases is not enough; libraries must ensure that users can actually discover, understand, and use the information made available to them. Students visit the library not only to borrow materials but also for help navigating their studies, and this access reflects the openness and inclusivity of a library system as a whole (Wilson, Neylon, Montgomery, & Huang, 2019), with knowledge sharing itself helping both individual learners and the wider academic community to thrive (Ajie, 2019). Older information retrieval systems forced users into rigid search patterns and left many frustrated when they did not know the "right" words; today's systems are more flexible and intuitive, making searches broader and more natural, and better search tools have made it easier to identify valuable material quickly, without extensive browsing through complicated catalogues (Enakrire & Onyancha, 2020).

When these systems function well, they do more than simply retrieve information: they draw users into genuine interaction with knowledge and with library staff (Olatokun & Njideaka, 2020). The shift to digital platforms has changed how academic libraries share

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information even further. Students now regularly download papers, read e-books, and search research databases from home or their hostels without ever visiting a physical library, a flexibility that makes it easier to complete academic work, especially for those juggling competing demands. Digital technologies have effectively opened libraries to those who are not physically present (Cox, 2023), and Nigerian institutions are slowly adapting their platforms accordingly (Awoyemi & Okojie, 2024), though this convenience also raises user expectations for speed and ease of access. Institutional repositories and open-access resources have played a comparable role in widening access, since researchers no longer need to pay for expensive subscriptions to reach quality scholarship and can instead draw on a growing pool of free research online, which particularly benefits institutions with limited budgets (Wilson, Neylon, Montgomery, & Huang, 2019) and allows institutions to showcase their own research to a broader, more powerful audience (Okuonghae & Igbinovia, 2019).

Even with these gains, genuine difficulties persist. Some libraries still struggle with unreliable internet access, outdated computers, or insufficient funding for digital resources, and even the best-designed access strategies can fail where the underlying infrastructure is weak (Anike, 2020), a limitation students feel acutely when studying for exams or writing research papers under time pressure. A related, often overlooked problem is that having access does not automatically mean users know how to exploit it: many students remain unaware of the full range of resources their libraries hold or how to locate them efficiently, and the ability to access information is closely tied to the ability to read and use it critically (Ajie, 2019), which is why ongoing guidance and training matter as much as the resources

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themselves (Enakrire & Onyancha, 2020). Ultimately, this writer would argue that access to knowledge in higher education is not a luxury but a necessity, one that shapes both the quality of learning and the future of scholarship, and that libraries which keep adapting thoughtfully, blending people, technology, and sound planning, are best placed to remain relevant (Cox, 2023; Awoyemi & Okojie, 2024).

Artificial Intelligence and Knowledge Access in Libraries

AI has become a genuinely powerful tool for helping users find and obtain information in libraries, particularly by changing how searches are conducted. Where users once had to guess the "right" keywords, AI-based search engines now go further, interpreting what a user actually wants and the context behind the query, which has made it considerably easier to locate relevant material. Smart information retrieval systems can process large volumes of data quickly and return highly relevant results (Monyela & Tella, 2024), while advanced indexing and automatic metadata generation have made it far easier to keep track of resources behind the scenes (Barman, 2024). The practical effect, in this writer's view, is that users spend less time searching and more time engaging with the material that actually matters to their work.

AI also supports information discovery through recommendation algorithms and personalised services. Many library platforms can now suggest books, articles, or databases relevant to a user based on their past activity, which makes the process of finding information more efficient and more personal, easing users' passage through complex information landscapes, especially when they are unsure where to begin (Andersdotter,

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2023). Conversational AI tools are similarly helping people communicate with information systems by making academic content easier to locate and understand (Zeb, Rehman, Bin Othayman, & Khan, 2025), a development that appears especially useful in developing countries, where such tools can support education and research by speeding up access to information (Barsha & Munshi, 2024). AI, in short, is not only making information retrieval faster; it is gradually changing how people engage with knowledge inside libraries altogether.

Inclusive Library Services

Inclusive library services can be understood as the deliberate effort by academic libraries to ensure that no user feels left out when accessing information. This is not simply a matter of providing resources; it means making those resources genuinely usable for people with different needs, backgrounds, and levels of confidence. Modern libraries are expected to respond to social diversity in practical, concrete ways (Kulikauskienė, 2019), and inclusivity, properly understood, reflects fairness and a genuine commitment to serving everyone rather than a select group (Igwe & Ayandokun, 2024).

Equity in information access sits at the heart of this idea. Giving every user the same resources may sound fair on paper, but it does not always produce equal outcomes, since some users need extra support to benefit fully from what a library offers. This is where equity becomes important: libraries are beginning to provide tailored support, such as assistive technologies and flexible access systems, to meet different needs (Okafor & Omorinkoba, 2025), and, in this writer's opinion, libraries that continue relying solely on

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standardised services risk leaving their most vulnerable users behind. Rethinking traditional approaches is therefore necessary if libraries are to genuinely accommodate users who might otherwise struggle to access information (Agbo & Anozie, 2024).

Inclusive services must also attend closely to the different groups that make up the academic community. For users with disabilities, this may mean providing tools such as screen readers, braille materials, or simple adjustments to physical layout, since accessibility should be built into both digital and physical services rather than treated as an afterthought (Kulikauskienė & Liukinevičienė, 2020). Remote learners, meanwhile, depend heavily on online resources, which means libraries must keep their digital platforms reliable and easy to use, and emerging technologies are increasingly helping libraries reach people who were previously excluded from full participation (Yunita & Iqbal, 2025). Language and social background also shape how comfortable users feel within the library space: students who are not fluent in the dominant language of instruction may struggle to engage with available materials, while those from marginalised communities may feel disconnected from traditional library environments altogether. Libraries, at their best, function as shared spaces where people from different walks of life can feel included and respected (Lijssen, 2023), and in the Nigerian context, librarians are increasingly finding creative ways to involve underrepresented groups, making the library a more welcoming place for everyone (HEC CLN & Nonrya, 2026).

Ultimately, inclusive library services speak to the broader purpose of education itself. A library that truly serves its users is one that recognises their differences and responds with empathy and practical support, which requires librarians to keep learning

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and adapting as user needs continue to change (Santos, 2025), with technology playing a strong supporting role when used thoughtfully (Oguntoye & Ajibare, 2024). When libraries take inclusivity seriously, in this writer's assessment, they do far more than provide access to books and databases: they create an environment where every user has a genuinely fair chance to succeed.

Artificial Intelligence and Inclusive Library Services

Artificial intelligence is reshaping academic libraries in ways that foster greater inclusivity and accessibility for all patrons. Within this framework, inclusivity means designing services that allow effortless information retrieval and use for every individual, regardless of ability, language, or geographic location. AI helps dismantle conventional barriers to access, empowering students, researchers, and other users to engage with resources more effectively, and AI-powered solutions allow libraries to disseminate knowledge in ways customised to individual needs, ensuring meaningful engagement for all users (Ikwuanusi, Adepoju, et al., 2023). Assistive technologies powered by AI have proven particularly valuable for users with disabilities: tools such as speech-to-text and text-to-speech applications allow visually impaired individuals, students with learning challenges, and people with physical limitations to access resources independently, giving users greater control over how they interact with information and reducing reliance on library staff for routine tasks (Ibegbulam, 2024). This benefit, however, depends heavily on librarians understanding and integrating these tools thoughtfully into everyday services

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(Anthonia & Idiodi, 2024), a point this writer considers just as important as the technology itself, since a powerful tool poorly implemented offers little real inclusion.

Language differences are another area where AI is making a genuine difference. Translation tools can convert materials into multiple languages, helping users who are not fluent in the dominant language of instruction to engage fully with library resources, promoting fairness and ensuring linguistic diversity does not become a barrier to learning or research (Hodonu-Wusu, 2025). AI also deepens personalisation in the information-seeking process more broadly: adaptive learning platforms and recommendation systems can suggest resources based on a user's past search patterns, stated preferences, or academic focus, simplifying the exploration of complex resources and guiding users toward what they actually need (Suleiman, Akanbi, & Ibidunni, 2024).

Virtual assistants and chatbots add a further layer of support through immediate guidance, addressing questions and directing users to relevant materials outside standard library hours, which is especially valuable for remote learners or students accessing resources from home (Ogwo & Ibegbulam, 2023). Behind the scenes, AI improves the organisation of library collections through smarter cataloguing, indexing, and metadata creation, making it easier for users, regardless of experience level, to discover relevant resources quickly and with less frustration (Ogungbenro, Esse, & Olowoporoku, 2025).

Despite these evident advantages, integrating AI into inclusive services requires careful planning. Concerns around privacy, algorithmic bias, and adequate staff training must be proactively managed if AI tools are genuinely to facilitate equitable access, which makes equipping librarians with the skills to implement AI responsibly essential (Nwabuisi

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& Jidere, 2024), alongside continuous evaluation to uphold both fairness and effectiveness (Gajbhiye, 2024). When implemented judiciously, this writer believes AI holds real potential to help academic libraries become genuinely inclusive environments, where all users are given a fair opportunity to access and benefit from knowledge.

Factors Affecting Artificial Intelligence Adoption in Academic Libraries

Integrating AI into academic libraries brings significant benefits, but it also introduces real challenges. A major impediment is inadequate ICT infrastructure: many libraries, particularly in less developed regions, lack the hardware, reliable internet connectivity, and robust digital platforms that AI systems require to function effectively, and advanced AI tools remain far less effective without this technological foundation (Zondi, Epizitone, & Nkomo, 2024). This lack of infrastructure prevents libraries from fully realising the benefits of intelligent systems, and the high costs associated with AI technologies compound this problem further. Implementing AI requires substantial investment in software licences, hardware upgrades, and ongoing maintenance, and these initial costs often exceed the budgets of many public and academic libraries, especially in countries with limited technology funding (Li, 2024), a constraint that, in this writer's view, risks widening the gap between well-resourced and under-resourced institutions rather than narrowing it.

A further obstacle stems from a deficiency in technical proficiency. Implementing AI systems requires a workforce with expertise in both the underlying technology and its practical application within library settings, yet a considerable number of librarians still

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demonstrate limited familiarity with AI deployment, machine learning, and data analytics, which impedes the incorporation of these systems into routine library functions (Shahzad, Khan, Iqbal, & Ahmed, 2025). Data privacy and security concerns present a related obstacle, since the effective operation of AI systems requires the collection and analysis of user data, raising legitimate questions about confidentiality, consent, and legal compliance; apprehension about data breaches or misuse of personal information can deter library management from embracing AI, particularly where digital privacy regulations remain unsettled (Olatunbosun, Ogunjobi, & Esther, 2025). Ethical considerations add a further layer of complexity, since AI algorithms may reflect biases embedded in their design or training data, potentially leading to the unfair treatment of specific user groups, a risk that makes it essential for libraries to carefully evaluate the ethical implications of AI adoption and ensure these systems promote equity rather than deepen existing disparities (Subuhpoto, Liu, Su, & Aziz, 2025).

Institutional inertia presents another significant obstacle. Library personnel accustomed to established procedures may resist automated, AI-based methods, and cultural and organisational dynamics frequently impede adoption, as staff may view AI as a threat to their employment or lack confidence in navigating new technologies (Ajani, Tella, Salawu, & Abdullahi, 2022). Overcoming this resistance requires comprehensive training and honest communication about the benefits of AI integration. The combined effect of these obstacles is visible in the slow pace of AI adoption across many libraries: even though AI clearly has the potential to improve service delivery, many Nigerian academic libraries remain in the early stages of using it, mainly because of limitations in resources, expertise,

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and organisational readiness (Yusuf, Adebayo, & Bello, 2022), with more advanced institutions pulling ahead of those still struggling with these basic constraints (Ayinde, Ebiefung, & Oladokun, 2026).

In this writer's assessment, overcoming these obstacles ultimately requires a comprehensive, deliberate strategy rather than piecemeal interventions. Investment in ICT infrastructure, dedicated budgetary allocation for AI technologies, sustained staff training, strong data protection policies, and clear ethical frameworks are all essential components of this strategy, alongside a broader culture of innovation that encourages staff to adapt to change and explore AI tools responsibly (Akinola, 2023).

Opportunities and Future Prospects of Artificial Intelligence in Academic Libraries

Artificial intelligence presents a significant opportunity to transform academic libraries well beyond their current state. One particularly promising advancement is the development of AI-powered digital libraries that offer tailored information access for each individual user. These systems can intelligently suggest relevant resources, track research trends, and even anticipate information needs based on user interactions, which, in this writer's view, could substantially improve accessibility, streamline research and learning, and reduce the limitations inherent in conventional cataloguing methods. Smart knowledge management systems represent a further opportunity: AI algorithms can organise and retrieve information more efficiently, allowing both librarians and users to navigate massive digital collections with ease. Such systems can support real-time indexing, semantic search, and metadata generation, improving the discoverability of resources and

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integrating with institutional repositories and open-access platforms to make knowledge sharing more streamlined.

The future of AI in academic libraries extends beyond efficiency and automation. Emerging technologies such as predictive analytics, AI-driven research assistants, and content summarisation tools have the capacity to fundamentally alter research processes, pedagogical approaches, and the overall learning environment. AI also opens up opportunities for resource-sharing between institutions, which could make it considerably easier for library users to access global collections, positioning libraries as increasingly proactive centres of knowledge that adapt continuously to the changing needs of academia. This writer holds that libraries which begin preparing for these developments now, rather than waiting for them to mature elsewhere, stand to benefit disproportionately once these tools become mainstream.

Recommendations

Based on the foregoing review, the following recommendations are proposed to guide the effective and responsible adoption of artificial intelligence in Nigerian academic libraries:

1. University authorities and library management should prioritise sustained investment in ICT infrastructure, including reliable internet connectivity, servers, and digital platforms, to provide the technological foundation that AI systems require.

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2. Deliberate budgetary allocation should be made for AI adoption, including software licences, hardware, and ongoing maintenance, with institutions pursuing partnerships, grants, and collaborative networks where internal funding is insufficient.
3. Continuous AI literacy and training programmes should be organised for librarians, covering both the technical operation of AI tools and their ethical and practical implications, so that staff can deploy these systems competently and confidently.
4. Libraries should develop clear institutional policies and governance frameworks addressing data privacy, algorithmic transparency, and responsible automation, to ensure that AI adoption remains ethical, equitable, and accountable.
5. Interdisciplinary collaboration between library professionals and computer scientists should be actively encouraged, so that AI solutions developed for libraries are contextually relevant and address genuine local challenges, such as multilingual access and assistive technology.
6. Library management should institute mechanisms for continuous evaluation of AI applications, to monitor fairness, effectiveness, and user impact, and to adjust implementation strategies as needs evolve.
7. Institutions should cultivate a broader culture of innovation that encourages staff to adapt to technological change and to explore AI tools responsibly, rather than treating AI adoption as a one-time technical project.

Conclusion

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This review has examined how artificial intelligence can enhance knowledge access and support inclusive library services in academic libraries, with particular attention to selected Nigerian universities. The review shows that AI technologies, including machine learning, natural language processing, intelligent discovery tools, and chatbots, are gradually finding their place in library operations, improving how collections are organised, how information is retrieved, and how patrons are assisted, including patrons with disabilities, language barriers, and other access challenges. Also, this paper maintains that Nigerian academic libraries have not yet reached the full potential of these technologies, held back by inadequate infrastructure, limited funding, insufficient technical expertise, and unresolved ethical questions around privacy and algorithmic bias.

In this writer's assessment, the path forward is neither purely technological nor purely administrative; it requires a deliberate combination of infrastructure investment, staff development, sound governance, and interdisciplinary collaboration. Where these elements are pursued together, AI stands to genuinely transform academic libraries into more efficient, inclusive, and user-centred institutions, consolidating their central place in knowledge creation, dissemination, and innovation within Nigeria's higher education system.

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