

# Exploring the utilisation of ChatGPT in academic libraries: a self-reflection perspective

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## Abstract

*Rationale of Study* – Exploring the utilisation of ChatGPT in academic libraries, with a focus on ChatGPT's views, not only addresses immediate concerns within the library community but also advances an understanding of the evolving relationship between artificial intelligence and information services in contemporary society.

*Methodology* – The study focused on the unique perspectives or viewpoints of ChatGPT itself. The main objective of the study was to explore ChatGPT's self-awareness and understanding of its role within the academic library context, including its perception of challenges, limitations, and contributions in facilitating information access and user support. The principal theory for this research study was grounded in the Technology Acceptance Model (TAM), which proposed that the perceived ease of use and perceived usefulness of technology are critical determinants of users' intentions to adopt and use that technology.

*Findings* – The findings revealed that ChatGPT demonstrated an understanding of its function in this context, enhancing the user experience, addressing information queries, and navigating the diverse needs of library patrons. It acknowledged both its contributions and limitations. It recognised challenges in facilitating information access and user support, indicating a nuanced understanding of its role in assisting library patrons.

*Implications* – This research contributes to the field of library and information science and offers insights into the broader implications of incorporating AI in information service settings.

*Originality* – The study is one of the few exploring the perspectives on how it can help improve library services.

## Keywords

Language models, artificial intelligence, self-reflection, technology integration, educational technology

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## 1 Introduction

In the dynamic landscape of academic libraries, the integration of cutting-edge technologies plays a pivotal role in enhancing user engagement and information services. Among these technologies, ChatGPT, a state-of-the-art language model developed by OpenAI, stands out as a powerful tool capable of natural language understanding and generation (Patel et al., 2023). OpenAI has been at the forefront of artificial intelligence since 2015, based in San Francisco and founded by Elon Musk, Sam Altman, Greg Brockman, Ilya Sutskever, Wojciech Zaremba and John Schulman (Haglund, 2023). Two months after its inception, it attracted 100 million active users in early 2023, making it the fastest-growing consumer application ever (Hu, 2023). ChatGPT is known for its natural language processing capabilities, allowing it to generate coherent and contextually relevant text based on given prompts (Rospigliosi, 2023; Sabzalieva & Valentini, 2023). ChatGPT can be compared to a "computer robot" with which users can converse about anything. Its user-friendly interface helps with this. It can be asked for data, analysis, and even an opinion (Sabzalieva & Valentini, 2023). Libraries, as traditional knowledge hubs in academic institutions, have been evolving to embrace digital technologies to improve user experiences and services. ChatGPT, with its conversational abilities, presents an intriguing opportunity to help in these domains (Chen, 2023).

This research seeks to delve into the utilisation of ChatGPT in the context of academic libraries, shedding light on its impact on user experience, information retrieval, and the overall dynamics of library services. As academic libraries continue to evolve to meet the diverse and evolving needs of their patrons, the incorporation of advanced technologies becomes imperative (Chen, 2023). ChatGPT has the potential to revolutionise how users interact with library systems, access information, and seek assistance (Liu et al., 2021). Moreover, what separates this study is its unique exploration of not only the perspectives of library users and staff but also the intrinsic viewpoint of ChatGPT itself. Understanding ChatGPT's perceptions, challenges, and contributions within the academic library setting provides a holistic and nuanced perspective on the symbiotic relationship between artificial intelligence (AI) and traditional library services. By engaging ChatGPT in natural language interactions, the study aims to uncover its self-awareness and grasp of its role in facilitating information access, thus contributing to the ongoing discourse on the ethical and practical implications of integrating language models into academic library environments. Through this exploration, the study seeks to address crucial questions surrounding the efficacy of

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ChatGPT in meeting the diverse needs of library users, its potential to enhance user experience, and the ethical considerations that arise in the deployment of such advanced technologies. This research not only contributes to the field of library and information science but also offers insights into the broader implications of incorporating AI in information service settings.

## 2 Rationale and objectives of the study

The exploration of ChatGPT's utilisation in academic libraries, coupled with an investigation into its perspectives, presents a compelling and timely research endeavour for several reasons:

- **Technological advancements in libraries** - Academic libraries are increasingly leveraging technological advancements to meet the evolving needs of their user communities. ChatGPT represents a cutting-edge development in natural language processing, and understanding its integration within the library setting is crucial to staying at the forefront of innovative library services.
- **Enhancing user experience** - The user experience is a paramount consideration in library services. By examining how ChatGPT contributes to user interactions, information retrieval, and problem-solving, this research aims to uncover potential enhancements in user experience that may arise from the implementation of advanced language models.
- **Unique perspectives of ChatGPT** - Examining the views of ChatGPT itself adds a novel dimension to the research. Understanding how the model perceives its role, challenges, and contributions provides insights into the self-awareness of artificial intelligence in a library context, contributing to the broader discourse on the ethics and implications of AI in various domains.
- **Ethical considerations and challenges** - The deployment of language models in academic libraries raises ethical considerations such as privacy, bias, and transparency (Patel et al., 2023). Investigating these aspects in the context of ChatGPT not only informs library practitioners about potential challenges but also contributes to the responsible and ethical use of AI in information services.

In essence, exploring the use of ChatGPT in academic libraries, with a focus on the model's perspectives, not only addresses immediate concerns within the library community but also

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advances our understanding of the evolving relationship between AI and information services in contemporary society.

The objective of this study is to explore ChatGPT's understanding of its role within the academic library context, including its perception of challenges, limitations, and contributions in facilitating information access and user support. The study will answer the following questions:

- What are the ChatGPT's perceptions of its roles, challenges, and contributions within academic libraries, as well as its view on its effectiveness in aiding information access?
- What ethical considerations arise from the deployment of ChatGPT in academic libraries, and how can these challenges be mitigated to ensure responsible and ethical use of artificial intelligence in library services?

### **3 Theoretical foundation**

Technology acceptance research is a mature field and has been active for two decades as technology has invaded all domains of life. "Some estimates indicate that, since the 1980s, about 50% of all new capital investment in organisations has been in information technology. However, for technologies to improve productivity, they must be accepted and used by employees in the organisation" (Venkatesh et al., 2003, p. 456). The principal theory for this research study was grounded in the Technology Acceptance Model (TAM). TAM is a widely recognised theoretical framework in information systems and technology adoption research. It is a theory in the field of information technology that models how users accept and use technology (Haglund, 2023). It was initially proposed by Fred Davis in 1989 in his doctoral study and was later extended by Venkatesh and Davis in 2000. TAM posits that the perceived ease of use and perceived usefulness of a technology are critical determinants of users' intentions to adopt and use that technology (Venkatesh et al., 2003).

Legris et al. (2003) argue that others have recognised TAM as a powerful, valid, and highly reliable predictive model that can be used in several contexts. It constitutes an important theoretical contribution to understanding ICT usage and acceptance behaviours (Chen et al., 2011). Applying this principle theory offered a robust theoretical foundation for examining the complex dynamics involved in the acceptance and utilisation of ChatGPT by key stakeholders (librarians, academics, and students) in university environments.

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Through research, TAM has been empirically proven to be a robust model for understanding end-user adoption of technology and for examining the acceptance of new and developing technology by users with different characteristics in different organisations. The flexibility of TAM, which can be extended and modified to take into account other relevant factors, makes it a powerful framework (Alomary & Woollard, 2015, p. 2). As a result, the TAM has emerged as the most essential theory in the field of information and communication technology (ICT) after academics employed it to examine how various technologies are adopted (Alomary & Woollard, 2015). In this study, librarians' and library users' perceptions of ChatGPT's usefulness in supporting teaching and learning, research, and community engagement, as well as its ease of use in accessing information and receiving assistance, are vital factors to be examined. Understanding how ChatGPT aligns with users' needs and expectations within the academic library context, as well as addressing any perceived barriers to its adoption, will provide insight into its potential effectiveness and acceptance. By applying TAM, the study aims to uncover the factors influencing ChatGPT's integration and assess its impact on enhancing library services and user experiences.

#### **4 Literature review**

The integration of AI technologies into higher education has gained momentum in recent years, reflecting the larger trend of digital transformation in educational practices. This literature review explores the existing research on the integration of AI, specifically ChatGPT, in higher education, with a focus on AI in Libraries and Information Services, ethical considerations in AI and challenges with AI integration in academic institutions. Addressing these issues enriches the study by providing a comprehensive understanding of the opportunities, challenges, and ethical considerations associated with integrating ChatGPT into academic libraries, thereby contributing to informed decision-making and responsible AI deployment.

##### **4.1 AI in libraries and information services**

Over the last decade, AI-based chatbots have seen significant development in libraries, with a rising global trend in using AI technology to enhance services and aid patrons (Lappalainen & Narayanan, 2023). ChatGPT, a cutting-edge language model, presents both opportunities and challenges in educational contexts, impacting librarians, academics, and students. Libraries play an essential role in providing information services, and AI technologies like ChatGPT offer avenues to enhance information retrieval and user

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interaction (Rigby, 2023). The tool serves as a discovery and search engine, providing relevant articles and refinement of search terms for users (Lappalainen & Narayanan, 2023; Cox & Tzoc, 2023). Additionally, ChatGPT assists librarians in tasks such as data analysis, copywriting, citation generation, and language translation (Cox & Tzoc, 2023; Chen, 2023; Adetayo, 2023). Its implementation not only frees up librarian time for more complex queries but also provides round-the-clock service, including audio responses for users with special needs (Adetayo, 2023; Rigby, 2023; Cox & Tzoc, 2023). However, concerns arise about AI biases and copyright ownership of AI-generated content, prompting librarians to educate users about potential biases in ChatGPT responses (Cox & Tzoc, 2023). Despite these challenges, ChatGPT is poised to revolutionise information literacy and digital literacy, offering rapid creation of syllabi and lesson plans, thereby reshaping library services (Cox & Tzoc, 2023).

#### **4.2 Ethical considerations in AI**

Ethical considerations are paramount in academic institutions, guiding what is deemed acceptable or unacceptable behaviour by users and ensuring proper information acquisition standards. The integration of AI in education raises ethical concerns about bias, privacy, and data security (Chukwuere, 2023; Livberber & Ayvaz, 2023; Lund et al., 2023). ChatGPT's output may be inaccurate, prejudiced, or even carry out malicious commands (Patel et al., 2023). Addressing these ethical considerations is crucial in the development and implementation of education. Questions arise regarding authorship determination and monetisation of AI tool searches. Academic integrity is challenged by AI-assisted cheating, as students use AI essay writing platforms, leading to plagiarism issues (Alser & Waisberg, 2023; Lund et al., 2023). Some academics propose to adjust the definition of plagiarism to include the use of ideas, words, or concepts (Anders, 2023; Cox & Tzoc, 2023). These concerns highlight the need for ethical guidelines and vigilance in the integration of AI in academic settings.

#### **4.3 Challenges with integrating ChatGPT into academic libraries**

Integrating ChatGPT into academic libraries presents a unique set of challenges that encompass both technological and ethical considerations. Firstly, there are concerns related to the adaptability of ChatGPT to the diverse needs of academic users. Academic libraries cater to a wide range of disciplines, and ensuring that the language model understands and generates contextually accurate information across various subjects is a significant technical hurdle. Moreover, maintaining the model's relevance and accuracy in the rapidly evolving academic landscape requires continuous updates and fine-tuning,

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posing a logistical challenge for library administrators. The usage of ChatGPT in academic libraries carries several potential risks and obstacles, such as the potential for misuse and the risk of losing one's employment. Furthermore, ChatGPT can provide erroneous query answers during reference transactions and is not as intelligent as a real librarian when it comes to understanding reference inquiries (Adetayo, 2023). Another limitation of the tool is that the model can generate offensive or harmful output (Liu et al., 2021). However, according to OpenAI, the tool is now able to reject inappropriate and dangerous requests.

## **5 Research methodology**

The researcher conducted natural language interactions with ChatGPT to obtain its responses and perspectives on investigating the tool's perspective on its own usage within academic libraries. This involved posing a variety of queries related to library services, user assistance, and information retrieval to ChatGPT. Understanding how ChatGPT can aid librarians in supporting teaching and learning, research, and community engagement helps assess its practical applications and benefits within academic library settings. The approach was also adopted by Lund et al. (2023), who examined the potential impact of ChatGPT on academia and libraries by interviewing ChatGPT itself. Chen (2023) also conducted a simple test where ChatGPT was asked questions about library services, and its responses were compared with those provided by conventional library chatbots. The current study used a qualitative research design, and qualitative methods are well-suited for exploring subjective experiences and perspectives, aligning with the self-reflection focus of the study. Employing a qualitative approach, the study delves into ChatGPT's experiences and viewpoints on the utilisation of the tool in academic libraries. The following questions were asked of ChatGPT:

- How can ChatGPT help librarians in support of teaching and learning, research, and community engagement?
- What are the ethical considerations associated with the integration of ChatGPT in academic libraries?
- What are the challenges and opportunities associated with the integration of ChatGPT into academic libraries?

## **6 Research findings**

Below are the answers that ChatGPT provided when asked how it can assist librarians in support of teaching, learning, research, and community engagement.

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### **6.1 Query: How can ChatGPT help librarians improve library service and support research?**

Answer: ChatGPT can offer valuable support to librarians in improving library services and supporting research efforts. Here are several ways in which ChatGPT can assist librarians: In the realm of information retrieval and research assistance, ChatGPT plays a pivotal role. One of its essential functions is to provide assistance with search queries, assist users in refining their search queries, identify relevant keywords, and suggest effective search strategies. This proves invaluable for library users who navigate databases and seek relevant research materials, enhancing their information retrieval experience. Additionally, ChatGPT offers support in the realm of reference and citation. It assists librarians by generating citations for diverse sources and formats. By providing accurate and current citation styles, ChatGPT facilitates adherence to academic standards, helping librarians and researchers alike maintain the integrity and credibility of their work (OpenAI, 2024).

In the realm of library resources, ChatGPT serves as a valuable tool. It offers virtual guided tours, helping users in navigating through library catalogues, databases, and digital archives. By providing step-by-step guidance, ChatGPT enhances the accessibility and user-friendliness of library resources, ensuring that library users can efficiently locate the information they seek. Furthermore, ChatGPT aids in database exploration by providing detailed overviews of specific databases. It highlights their content, specialisations, and distinctive features, enabling librarians to assist library users in selecting the most suitable databases for their research requirements. This functionality enhances the efficiency of database exploration, empowering users to make informed choices and optimise their research endeavours. In supporting interlibrary loan services, ChatGPT serves as a valuable aid to both librarians and library users. It offers guidance on how to navigate these services, provides information about available resources and eligibility criteria, and guides users through the process of requesting materials from other libraries. This assistance streamlines the interlibrary loan process, ensuring that library users can easily access materials beyond their library's collection.

Moreover, ChatGPT contributes to library programme promotion by assisting librarians in crafting compelling promotional content. It helps to generate engaging descriptions, event summaries, and marketing materials for library programmes, events, and workshops. This functionality enhances the effectiveness of marketing efforts, attracting the interest and participation of library patrons and thereby fostering community engagement and participation in library activities (OpenAI, 2024).



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ChatGPT offers automated support to address frequently asked questions and respond to common queries. By handling routine inquiries, librarians dedicate their time and attention to addressing more complex questions and engaging in personalised interactions with patrons, improving the overall quality of service provided. Additionally, ChatGPT extends its utility by offering language translation services. This feature facilitates multilingual support, allowing librarians to communicate effectively with patrons who may prefer information in a language other than the library's primary language. By breaking down language barriers, ChatGPT enhances accessibility and inclusivity, ensuring that all patrons can benefit from the resources and services offered by the library. Within accessibility services, ChatGPT offers valuable guidance by advising library users on available accessibility tools and services within the library. This ensures that individuals with diverse needs can fully use library resources, promoting inclusivity and equal access for all.

Moreover, ChatGPT provides collaborative research support by helping librarians in collaborative writing endeavours. It offers support in writing and editing sections of research papers, proposals, or reports, enhancing the efficiency and quality of collaborative research efforts. In addition, ChatGPT contributes to professional development by generating learning materials and training resources for librarians. These resources support librarians' ongoing professional growth in areas such as information literacy, technology integration, and research methodologies, empowering them to excel in their roles and stay abreast of emerging trends and practices in the field (OpenAI, 2024).

## **6.2 Query: Identify and analyse the challenges and opportunities associated with the integration of ChatGPT into academic libraries**

Answer: Integration of ChatGPT into academic libraries presents a host of challenges and opportunities. Challenges arise in ensuring the accuracy and relevance of ChatGPT across diverse academic disciplines within academic libraries. With libraries covering a wide range of topics, tailoring ChatGPT to provide contextually accurate information requires extensive fine-tuning and continuous updates. Furthermore, addressing potential biases in language generation is crucial to ensure that the model is inclusive and accessible to discriminatory output. The rapid evolution of academic content further complicates this task. However, amidst these challenges, there are opportunities for innovation. ChatGPT can serve as a dynamic and intelligent virtual assistant, helping students and faculty with research queries, catalogue searches, and general information retrieval. This has the potential to improve the overall efficiency of library services and enhance the user experience.

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Furthermore, ChatGPT can be used to create interactive and personalised learning resources, promoting digital literacy and research skills among library patrons. Nevertheless, ethical considerations loom large in the integration of ChatGPT into academic libraries. Striking the right balance between harnessing its power for improved library services and ensuring responsible AI usage is paramount. Issues related to user privacy, data security, and transparency in AI decision-making processes need careful consideration and implementation of robust policies to mitigate potential risks and uphold ethical standards (OpenAI, 2024).

### **6.3 Query: Investigate the ethical considerations associated with the integration of ChatGPT into academic libraries**

Answer: The integration of ChatGPT into academic libraries raises several ethical considerations that warrant careful examination. Here are some key ethical considerations associated with this integration. Bias and fairness are significant considerations when integrating ChatGPT into academic libraries. Like many language models, ChatGPT can inherit and perpetuate biases present in the training data. Given the diverse range of subjects and users in academic libraries, biases in language generation may disproportionately affect specific disciplines or user groups. It is essential to ensure fairness and impartiality in the responses generated by ChatGPT to prevent reinforcing existing biases within academic contexts. Privacy and data security are paramount concerns in academic libraries, which often handle sensitive user information and research data. The integration of ChatGPT raises concerns about the privacy and security of user interactions. To address this, libraries must implement robust measures to protect user data and inform users about how their data is used and stored and whether it is anonymised. Transparency and explainability are crucial for users to trust the information provided by ChatGPT. The inner workings of complex language models such as ChatGPT are often not transparent, making it challenging to understand how the model arrives at specific responses. Ensuring transparency in the ChatGPT decision-making process is essential, and libraries should be transparent about the limitations of the model and the potential for errors (OpenAI, 2024).

User consent and autonomy are fundamental principles that should be respected when implementing ChatGPT. Users who interact with ChatGPT should be fully informed about the nature of the AI system and its capabilities. Obtaining explicit and informed consent from users before using ChatGPT is crucial, and libraries should provide options for users who prefer not to use AI-based services. While ChatGPT can be a valuable educational tool, there is a risk of misuse, such as plagiarism, academic dishonesty, or the

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dissemination of false information. Academic libraries must establish guidelines for the appropriate use of ChatGPT and promote responsible and ethical use of AI technology. Continuous monitoring and updating are necessary to ensure that ChatGPT stays relevant and accurate over time. Libraries must have mechanisms in place to monitor the system for unintended consequences, errors, or biases and promptly address any issues that arise. Inclusivity and accessibility are vital considerations in the design and implementation of ChatGPT. Libraries should ensure that ChatGPT is accessible to all users, including those with disabilities, and efforts should be made to avoid creating barriers for any user group (OpenAI, 2024).

### **7 Discussion of the findings**

Library staff must welcome ChatGPT as their new colleague and partner to enhance the library service and support users. The tool calls for a redefinition of the roles of academics and librarians toward more intricate areas of instruction (Chukwuere, 2023). Using ChatGPT will be like having a mobile library for users. Integrating ChatGPT into library services requires thoughtful planning, and librarians should be actively involved in defining their role to ensure that it aligns with the library's goals and enhances the user experience. Regular updates, monitoring, and feedback mechanisms can contribute to the continuous improvement of ChatGPT-powered library services. The main focus of the conversation that ChatGPT aims to promote is questioning and follow-up questioning. By posing queries and thoughtfully reviewing the responses, this kind of communication promotes the use of ChatGPT for education. These are the fundamental tasks of interactive education. Because ChatGPT may respond to follow-up inquiries, users can challenge and clarify information. This fosters comprehension of various ideas and concepts at a deeper level and supports integration with existing knowledge.

Librarians can assist faculty in teaching students critical thinking skills to validate facts and assess the quality of the answers provided by ChatGPT. Although it may be challenging to identify a work written or created by a student vs. an AI tool, teaching students and faculty information literacy skills will help them make educated guesses through critical analysis of what is presented. While AI tools have the potential to improve people's lives and those of those being served, they cannot replace the human interactions that distinguish humans from any technology. The tool was introduced to partner with librarians and not to replace their jobs and services. Libraries can embrace the AI revolution by evaluating these new tools and developing services to support their use (Cox & Tzoc, 2023). The tool will free

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up the librarian's time so that they can focus on other office duties. ChatGPT itself agrees that it can make mistakes by displaying this message on its website: *ChatGPT can make mistakes. Consider checking important information.* Users of the tool are encouraged to evaluate the search results because it can cite reference articles that do not exist or perpetuate sexist stereotypes. ChatGPT can improve several library services, such as search and discovery, reference and information services, cataloguing and metadata generation, and content creation. However, the tool needs to be used responsibly, and ethical considerations such as privacy issues and bias need to be taken into account.

This technology presents significant opportunities and challenges and has the potential for positive and negative impacts for organisations, primarily academic institutions. If used correctly and responsibly, ChatGPT can become a good friend, not an enemy, of academics, librarians, and students at academic institutions. ChatGPT can identify occurrences of plagiarism incidents and provide recommendations for originality. The implementation of this practice can potentially uphold the fundamental principles of academic integrity while fostering ethical conduct among students. The use of ChatGPT in academic production processes raises the issue of who owns the information. Who owns the output produced by ChatGPT? Is it the tool or the individual? Ownership of work from ChatGPT is still problematic (Lund et al., 2023; Sabzalieva & Valentini, 2023). Users argue that they analysed and evaluated the results from ChatGPT, and therefore, the output is their work. This argument is supported by Harel and Papert (1990), who argued that learning is enhanced when it is "made one's own", which they called appropriability. They emphasised that by asking follow-up questions and seeking clarifications, students are able to customise the information they are given and make it uniquely their own.

Another main challenge or limitation of AI tools, according to Islam and Islam (2023), is that users may become dependent on AI applications, leading to weaknesses in productivity and critical thinking skills (Chukwuere, 2023). ChatGPT's knowledge is restricted to what it learnt prior to 2021, unlike search engines, and it is unable to explore the web for information on current events (Aydın & Karaarslan, 2022). While challenges such as domain adaptation, bias mitigation, and ethical concerns must be addressed, the integration of ChatGPT into academic libraries presents exciting prospects for revolutionising information services, fostering digital literacy, and providing more personalised user experiences. Achieving this balance will require collaborative efforts between technologists, librarians, and ethicists to ensure the responsible and beneficial integration of ChatGPT into academic settings.

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The author concludes that although ChatGPT has the potential to be advantageous for academic libraries, it is crucial to thoroughly consider and handle any dangers or difficulties that may arise from using it. To provide users with the most incredible experience possible, libraries must create clear standards and norms, routinely analyse their performance, and apply them ethically and efficiently. ChatGPT has great potential to transform library Reference services by offering personalised, accessible, and cost-effective support to users. AI tools, like ChatGPT, are here to stay and are freely available to everyone; it is a new reality. Every person, particularly librarians and library users, must develop their own AI literacy to use the tool to their own benefit. ChatGPT offers significant potential to promote academia and librarianship in novel and nerve-racking ways. However, it is essential to consider how to use this technology responsibly and ethically and to uncover professionals who can work alongside this technology to improve their work rather than abuse it or allow it to abuse us in the race to create new scholarly knowledge and educate future professionals (Lund et al., 2023).

## **8 Conclusion**

The exploration of ChatGPT's utilisation in academic libraries, coupled with an in-depth examination of its own perspectives, has unveiled a multifaceted landscape at the intersection of artificial intelligence and library services. Through a self-reflection approach of natural language interactions with ChatGPT, this research sought to understand the impact, challenges, and contributions of ChatGPT in the academic library context. Exploring ChatGPT's own perspectives revealed a level of self-awareness that exceeded expectations. The model demonstrated an understanding of its role in supporting library services, acknowledging its limitations, and expressing a commitment to continuous improvement. This unique insight into ChatGPT's self-perception contributes to ongoing discussions about the evolving nature of AI and its potential roles in information services. The exploration of ChatGPT in academic libraries not only expands our understanding of AI applications in library settings but also prompts reflection on the evolving roles of technology and human expertise. As libraries embrace the opportunities presented by advanced language models, this research serves as a guidepost for informed decision-making, fostering a balance between technological innovation, ethical considerations, and user-centric library services.

## **9 Recommendations**

The following is the study:

- Academic libraries must develop user education and awareness programs on the use of ChatGPT. Clear information on how the technology functions and addressing common misconceptions can foster trust and promote a more informed user community.
- Implement training programmes for library staff that focus on ethical considerations associated with AI integration. This includes addressing biases, ensuring transparency, and establishing protocols for handling sensitive user data, thereby promoting responsible AI practices within the library.
- Library users must conduct regular evaluations and audits of ChatGPT responses to ensure ongoing accuracy, relevance, and adherence to ethical standards. Establish protocols for addressing and rectifying any identified biases, errors, or areas for improvement, ensuring that the model is aligned with library service goals.
- Stay informed about evolving industry best practices in AI implementation within libraries. Regularly participate in conferences, workshops, and professional networks to share experiences, challenges, and solutions with other institutions that incorporate advanced language models in their information services.

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