**Considerations and Best Practices for Libraries Navigating AI**

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**Abstract**

The ways in which people gather information continue to change, and AI has already established itself as a widespread and powerful tool with enormous potential for upheaval and even harm. This paper examines the changes AI is making to the roles of libraries and librarians, with a focus on reference services. Key observations include the superiority of services from reference librarians over AI interfaces like ChatGPT, the strengths and weaknesses of libraries, the potential responses of libraries to the harms of AI, as well as what librarians can learn/gather from AI.

**Considerations and Best Practices for Libraries Navigating AI**

Despite legal, ethical, and social concerns, AI products have made their way into the mainstream and the lives of hundreds of millions of individuals. ChatGPT, for example, reached “100 million monthly active users” within two months of its launch (Hu, 2023). This rapid change poses problems for users, who receive fast yet dubious information of unknown origin, as well as libraries, which have begun to experience change in their “knowledge processes” (Hosseini et al., pp. 20, 2024). In their role as information experts committed to serving their communities, the proliferation of AI products presents LIS professionals with both a challenge and an opportunity. This paper proposes that an ethical and research-informed approach to this situation would be marked by continued prioritization of traditional or basic services, experimentation with access and guidance surrounding AI technology, and special attention to the risks AI products pose to specific communities and demographics.

Given the sweeping changes to library services - and especially reference services – ushered in by previous online technological innovations (for example: search engines and Wikipedia), a tool as powerful, intuitive, and convenient as AI is cause for concern regarding the future of reference (Saunders, 2024). While the reference capabilities of tools like ChatGPT are impressive - especially considering their novelty and lack of specialization - studies have shown that reference librarians still generally outperform these models (Saunders, 2024). For librarians, it’s encouraging that even reference, one of the most AI-adaptable roles, is still better performed by humans. Research by Saunders and Rutherford indicates that reference librarians matched or outperformed ChatGPT “in terms the thoroughness and accuracy of answers as well as with regard to the relational and communication aspects” (p. 252). These findings underscore the importance of continued focus on friendly, empathetic service and the quality of reference answers.

Amy VanScoy argues that the “interpersonal aspect is of critical importance in reference service and should be actively considered when envisioning the future” (p. 719, 2020). While ChatGPT was able to perform well at engaging in a pleasant conversation, librarians can better engage in what VanScoy calls “cognitive empathy”, a skill that is fundamental to understanding someone else’s reasoning to address their needs. This happens in practice during a reference interview, which is another skill that AI currently lacks. AI and its “facade of trustworthiness” will return confident answers even if it is wrong or doesn’t understand the query (Saunders, p. 241, 2024). While librarians can suffer from this as well, they are generally better at finding information needs using social skills and a reference interview (Saunders, p. 242, 2024). Librarians have an interest in meeting the information needs of their library’s users, and they can use their skills and experience to do so effectively. In the context of AI filling many libraries users’ reference needs, it may be helpful to inform people about the differences between these services. Doing so may foster an awareness of the current limitations of AI products and improve and increase reference services.

One of those limitations is that popular AI tools are made for general purpose and not for a given library community. Contrastingly, libraries have a special commitment to community and years of experience working to meet their communities’ needs. The librarians working there can empathize with their patrons, build relationships, and understand their community’s unique information needs. This dynamic is fundamentally unchanged by recent technological innovations, and in fact, puts librarians in a position to add new services by promoting fair access to technology and instructing users in the use of these tools.

The widespread use of AI products has created a new information need for “guidance in AI literacy to understand the relative merits of various tools” (Tunon, p. 18, 2024). Librarians can improve users experience with AI by instructing in the assessment of AI responses (including by examining sources when possible), encouraging verifying information from AI, and offering advice on when to use AI. To this end, some have called for reference librarians to “develop their expertise” regarding AI both to use professionally in library operations as well as to better help users with their own AI interactions. While improving skills and knowledge in this area is undoubtedly wise, there may be ethical concerns about libraries using AI to perform functions traditionally done by employees. On the one hand, these types of practices are likely cost effective and may greatly benefit underfunded libraries, they might also be detrimental for job security and opportunities.

Grounded in a similar concern, Hosseini et al. note that “Librarians have a duty to promote responsible AI use and best practices surrounding ... bias, misinformation, cyber security, copyrights, and intellectual property, among others.” (2024). This follows from the notion that instruction allowing users to search on their own is “important to the reference transaction” (Saunders, p.240, 2024). The murky connection between the output of AI tools and the real world and sources is not clear to everyone and may cause problems ranging from misinformation to legal trouble.

The potential harms of AI are plentiful, and libraries can help protect their users from some of these. Weidinger et al. identify a number of risks associated with AI use, including disparate access to the technology and that “anthropomorphizing systems can lead to overreliance or unsafe use” (Weidinger, p. 34&29, 2021). Libraries can continue to provide access to hardware and internet to mitigate unequal access to technology, and they can include support for AI in reference services to help users make AI meet their needs. Furthermore, by informing users on the shortcomings of AI, they can help prevent harms such as misinformation (including on important topics like medical or legal queries). Critically evaluating the material generated by AI may help in these cases. Other harms may require more nuanced approaches, as in the case of bias. As AI will not serve all communities equally well, it may be fitting to supplement research done with AI with more traditional methods.

Applications for AI in libraries are countless, but promising and relatively low cost. It may be advisable to discover what works in a given setting by being unafraid of “failing fast” (VanScoy, p. 722, 2020). Scholarship from Barrett et al. suggests that users find email reference services to be “slow, inefficient, and overly formal” (p.389, 2024). AI might have a use providing fast and convenient, round-the-clock service in a library setting. Such a use would best be employed to complement reference librarians and would have to be tailored to a library community to provide the best and most ethical service.

AI is a powerful tool and improves users’ ability to get fast, comprehensible information for little effort. It’s also harmful in some cases. LIS professionals can help their users know when and how to employ AI. Despite changes, the potential for quality and unique reference services in every library community persists.

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