Unlocking the potential of AI for OCPL

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The age of AI is here

Although Artificial Intelligence (AI) has been in theoretical and practical development for decades, the past 18 months has brought the technology from the laboratory to the personal devices of common citizens. Web and mobile applications like ChatGPT, released in November of 2022, are widely available and used by people of all ages, education levels, professional backgrounds, and have implications for all industries. In this paper I will outline some opportunities and challenges to consider in planning OCPL's implementation of AI into its service model.

For the purpose of this discussion, AI is broadly defined as a set of digital tools that can be used to carry out human tasks, at scale, such as: analyzing and interpreting data, detecting patterns, natural language processing, making recommendations, responding to queries, creating new artifacts, learning, and problem-solving. It is important to note that there are different flavors of Artificial Intelligence, some which have been a core component of technologies already used by many, such as search engines and social media. These are based on more predictive AI models which rely on historical data to inform users about potential actions or decisions they can make in their respective applications. There are other technologies, like the ChatGPT, which are based on a generative AI model used to create written documents, computer code, images, music, and other creative artifacts. In this discussion, I am referring to both these variants.

The library's role in the expanding world of AI Technology

Libraries are places of exploration, learning, and capacity building. In this section I will describe some ways in which libraries can (and should) respond to the growth of AI in society.

AI literacy

With the growing adoption and availability of AI tools on mobile and personal devices, public service staff in libraries need to stay informed and become competent in navigating these resources. There is a plethora of AI programs available in the marketplace that cater to different segments of

interest. It would be important for library staff to be familiar with the use cases and needs of patrons to point them to the most appropriate resources.

AI features a new widely adopted avenue for information retrieval with students now using it to complete school assignments, and information seekers using it to satisfy curiosity or gain knowledge. As such, it is critical that our information professionals are equipped with the knowledge and skill necessary to cultivate the responsible and effective patron stewardship of AI technology. The algorithms and computation in the background of these AI tools is impressive, but much like search engines such as Google, AI's performance also relies on the user's ability to submit prompts that are coherent and effective in extracting useful information. Librarians are trained in these methods and can offer guidance on how to best structure these prompts.

The results from these prompts are not always accurate (hallucinations), and they do not always cite credible or even real sources when delivering information. For this reason, librarians still must play a role in helping patrons validate information presented on these platforms and help fight the spread of misinformation in the public sphere, while helping to preserve the practice of crediting original sources of information being presented by others.

AI Access

The cost of AI technologies is extremely high due to the software engineering, hardware components, and data sets needed to power them. Many AI companies have gone public, offering shares for equity, while competing with larger tech companies in the race to build the biggest and best AI platforms that can be monetized to generate revenue and profit. It is likely that these tools are commoditized in such a way that the industry contributes to a wider digital divide where the haves are those who have the access and competency to use them, and the have-nots are those which simply do not.

Libraries are in the business of providing access to resources, especially to those that present a financial hurdle for underprivileged communities to take advantage of them. Open AI released ChatGPT as free to use for users with an account. The free version, however, is limited to providing information sourced from an older data set (2021 data). The free version is also vulnerable to outages during peak times of the platform's usage. A paid subscription to ChatGPT, for $20 per month, would offer users constant access to the tool (regardless of its usage levels), faster response time, access to the latest software updates, and better-quality data for answers and insights (Pocock, 2023).

The pricing disparity is argued to be worth it but would not necessarily be affordable to patrons living in our more impoverished communities. If libraries can offer access to high quality AI tools in our makerspaces or dedicated computer labs, this would serve to address an imminent disparity around the use of a technology that is growing in its use by students, creatives, entrepreneurs, and researchers. The anticipated implications of AI for workforce development and economic prosperity cannot be overstated.

Integrating AI into library services

The continued development of AI software presents several opportunities for advancing library services. These include:

1. <u>AI software subscriptions</u>: allowing patrons to independently explore popular or new AI platforms allowing them to test, practice, and use their skills for advancing their goals. This library service can help increase confidence and competencies, subsidize costs, and create communities of special interests around AI.

2. <u>AI-centered programming</u>: whether it is educational or recreational, programs open to the public that incorporate AI software through demonstrated use cases, or even as the

outcome of a staff generated prompt, patrons can look forward to new and innovative events or activities to participate in at their local libraries.

3. <u>Improved Information Retrieval</u>: undoubtedly, library technology companies are investing resources to integrate AI into our online patron access catalog (OPAC) where patrons search for books and materials that we own. The data generated by patron searches can be analyzed to generate more relevant and timely search results for staff and patrons.

4. <u>Personalizing the patron experience</u>: by analyzing a patron's borrowing history, popular search terms, and items with the most holds (reservations) to make inferences on a patron's interests, AI software could effectively make recommendations for books and materials to borrow, as well as library programs to attend.

5. <u>Accommodating diversity</u>: AI tools can interpret and interact with multiple languages. This would be a value add for communities like Syracuse which has citizens from all over the world and speak many different languages. Being able to provide information electronically to others in their native languages provides the opportunity to make our information and resources truly available and useful to everyone.

6. <u>Data-driven decision-making</u>: libraries already capture data points such as circulation, door traffic, program attendance, and information desk interactions. Using AI, OCPL could help us more easily make decisions related to acquisition and collection development, budget and resource allocation, programming, and staff development.

7. <u>Extending service hours</u>: many patrons are familiar with chatbots that respond to questions in place of a real agent of the organization. AI has made this application a much-improved experience. OCPL hosted virtual assistants that could respond to patron queries well beyond our hours of operation. Even during hours of operation, virtual

assistance would reduce wait times for service and allow public service staff to attend to others who need extensive and personalized help.

Conclusion

We are still in the early stages of widespread adoption of AI tools. There is much work to be done on industry regulation of use and development of these technologies. It is clear to see the potential impact on productivity, speed, and efficiency on our workforce and resources, but there remain issues and considerations to unpack concerning ethics, intellectual property, cyber security, and privacy, to name a few. Libraries must strategize on how to manage the associated costs and uncertainties that come with AI, while fighting the tendency to lag in the adoption of new technology. That said, it is the right time to expose and prepare our staff and patrons for what some call the coming of the 4th industrial revolution.

References

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