

A Human Librarian Interviews ChatGPT

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Abstract

In an effort to understand how ChatGPT might be used as a scholarly research tool, I conducted an informal, unstructured interview with the AI chatbot. I learned that it generates its responses based on patterns it identifies in its large reservoir of text data; ChatGPT cannot vouch for the accuracy of the information it presents, nor cite its sources. For this reason, instead of being used as an information source in itself, ChatGPT may be better suited as an information assistant, helping researchers design searches for information in other sources in tandem with “human librarians” (as it designates academic librarians like myself). This reflective piece describes and evaluates the AI chatbot using its own generated content and provides a foundation from which librarians can explore the topic of AI chatbots and scholarly research within information literacy classes.

Keywords: ChatGPT, artificial intelligence, academic librarianship, research, information literacy

“Where do you usually start your research?” I asked my information literacy class.

It was late February 2023, and I was running one of my standard undergraduate-level one-shot sessions. I stood at the front of the room and watched the live-polling results flood the screen. As anticipated, Google dominated the pie chart. We discussed Google, Google Scholar, library databases, and the pros and cons of using each as starting points for research. But then a student near the front of the room raised his hand.

“What about ChatGPT?”

I knew about the AI chatbot's existence. I hadn't used it myself, but I had heard plenty of warnings and speculation about its potential for sparking plagiarism scandals in academia (Barnett, 2023). I had not heard about its research potential, and it was not represented on my pie chart. I told the student that the jury was still out; I didn't know yet what kind of material it would retrieve and how reliable it might be, but I would look into it.

As the semester continued, I read everything that I could find related to developments in generative AI and ChatGPT. Still, much of what I found either related to plagiarism or detailed how ChatGPT could be used to reimagine assignments for university students. I did not know how it could be best used as a research tool or support. So, on May 1, 2023, I decided to go straight to the source: I conducted an interview with ChatGPT.

The process of using the AI chatbot begins when a user types a prompt or a question into a chat bar. ChatGPT then formulates a response that appears word by word on the screen. These responses can be regenerated if you are not happy with the first response. ChatGPT will remember what you have asked it within the thread of your conversation, so it understands the context of follow-up questions.

My approach was informal and unstructured. I began by asking how academic librarians can use ChatGPT. The answers that I received were very similar to those described by Cox and Tzoc (2023) and Grasso (2023), offering suggestions ranging from using chatbots for reference services to providing interactive, AI-powered information literacy and academic integrity tutorials. This was useful, but not quite to the point. I shifted my approach to ask questions from a researcher's perspective. To start, I asked, "Why doesn't ChatGPT cite its sources? How can I know where you are getting your information from?" The answer I received included the following:

As an AI language model, ChatGPT generates responses based on patterns and associations it has learned from a large corpus of text data. Therefore, ChatGPT does not have specific sources to cite for each response it generates. [...] If you are looking for specific sources related to a particular topic, you may want to consult other resources such as scholarly databases, books, or other

reliable sources. Academic librarians can help you find appropriate sources for your research needs.

It is also important to evaluate information critically and assess its credibility, regardless of the source. Some things to consider when evaluating information include the author's credentials, the publication or website where the information appears, the date of publication, and whether the information is supported by other reliable sources. (ChatGPT, 2023j)

In short, ChatGPT explained that it was not evaluating or verifying the information it took in or created—this is something that I must do as a researcher. It is, at its core, a pattern machine, built on an enormous reservoir of text. The acknowledgement that it is not a substitute for other kinds of information resources, and that it recommends the help of academic librarians when searching for material, was enlightening—and reassuring. The chatbot is not an all-knowing entity.

I followed up by asking, “Would you recommend using ChatGPT as a research tool if you provide answers based on patterns and not specific sources?” The answer echoed the one above, but added extra notes of caution:

While ChatGPT can provide useful insights and generate responses based on patterns it has learned from a large corpus of text data, it is not a substitute for a comprehensive research tool or a human expert in a specific field.

ChatGPT is designed to assist with general inquiries and provide quick answers to common questions. However, it may not always provide accurate or comprehensive information, and its responses may not be appropriate for academic research or other important decision-making tasks. (ChatGPT, 2023m)

ChatGPT is definitely not, then, the best tool for directly accessing information and research material. The idea that ChatGPT may be unreliable is already being explored in articles exposing some of ChatGPT’s inaccuracies and biases (Alba, 2022; Day, 2023). I also asked it if it could be compared to an encyclopedia, and it emphasized that encyclopedias are written, edited, and fact-checked by experts;

ChatGPT is not (ChatGPT, 2023h). Critical thinking is essential when evaluating its responses, and more study is needed into its language patterns to understand how it creates those responses.

I asked ChatGPT to regenerate its answer to the question above to test its functionality and discover if it would state anything different. It rephrased its answer and made one addition:

ChatGPT can be used as a complementary tool to support the research process. For example, ChatGPT can help generate ideas and suggest keywords for a research topic, provide background information on a subject, or offer a different perspective on a research question. However, the information provided by ChatGPT should always be evaluated critically and verified with other reliable sources. (ChatGPT, 2023n)

ChatGPT is not, then, a new, super-powered search engine and information resource; it is not reliable enough to be an information source in itself. However, it may be very good at *developing searches* for information.

As an academic librarian who frequently assists students and researchers with their searches, I found this to be an interesting idea. The process of identifying key concepts and brainstorming a variety of related terms to create the perfect search can be slow, and it is dependent upon how familiar the researcher is with their topic and the words that are used to describe it. ChatGPT may be able to help researchers and librarians generate richer and more accurate search terms more quickly by using its language patterns to identify the most common phrasings of key concepts. I informally tested this idea by asking ChatGPT to generate a search to help me find articles related to realism in Victorian literature—a simple topic with which I am familiar. The search terms that it provided, and its suggestions for how to combine them with Boolean

operators, were a good start towards search string generation.¹ Additional recommendations to search academic resources and find material written by experts in the field were also sound, but the AI tool did not provide a comprehensive list with which to follow up. These are clear points where a librarian's assistance would be needed—confirmed by ChatGPT itself in answer to my next question.

I asked ChatGPT if it would be fair to compare it to a librarian. It said yes, but recognized that, although our services can be similar (insofar as we both provide information to our users),

a human librarian can provide personalized assistance, recommend resources, and offer guidance on research strategies [... and] may be better equipped to provide more nuanced and contextualized information, as they have the ability to draw on their own knowledge and experience in addition to the resources available to them. (ChatGPT, 2023l)

ChatGPT, instead, relies “solely on my programming and the patterns and relationships in my training data to generate responses to user questions” (ChatGPT, 2023l).

¹ ChatGPT's response to “If I wanted to find articles about realism in Victorian literature, what search strategies would you recommend?”:

To find articles about realism in Victorian literature, here are some search strategies that you might find useful:

1. Start with a general search using keywords such as "realism," "Victorian literature," and "criticism." This can give you a broad idea of what articles and resources are available.
2. Narrow down your search by using more specific keywords related to your topic, such as the name of a particular author, book, or theme. For example, you might search for "realism in Charles Dickens' novels" or "Victorian literature and social realism."
3. Use Boolean operators such as "AND" and "OR" to combine search terms and create more focused searches. For example, you might search for "Victorian literature AND realism" or "realism OR naturalism in Victorian literature."
4. Use databases and search engines that specialize in academic research, such as JSTOR, Project MUSE, or Google Scholar. These resources are likely to contain more relevant and reliable sources than general web searches.
5. Look for articles and books written by experts in the field, as these sources are likely to provide more in-depth and nuanced discussions of your topic.
6. Don't forget to refine your search and try different combinations of keywords until you find the information you need.

I hope these tips help you find the information you are looking for! (ChatGPT, 2023g)

ChatGPT, then, may be better suited to the role of an information assistant, helping researchers design searches for information in tandem with “human librarians.”

I asked ChatGPT a total of 35 questions, some elaborating upon points made in the answers above, and others expanding into more entertaining territory (does ChatGPT understand and obey Asimov’s laws?²), because, regardless of its functionality, it is kind of *fun* to see ChatGPT in action. My informal interview has given me some knowledge of how the AI chatbot works and where its strengths and weaknesses lie. Although more experimentation is needed, particularly around search string generation, before I begin to use it professionally in my library work, I am now confident that I can assist my students and researchers in critically evaluating both their use of ChatGPT and its responses.

The following is a summary of additional information learned from my interview, which may be of interest to other librarians who are interested in the tool:

- ChatGPT’s “knowledge cutoff” was in 2021 (ChatGPT, 2023d). “Updates and improvements” continue to be made, but there is no clear timeline for when new text data will be added or what this text data will be (ChatGPT, 2023f).
- It can work in several languages, including Spanish, French, German, Italian, Portuguese, Chinese, Japanese, and Korean. However, it adds the caveat that its “ability to generate accurate and coherent responses may be limited by the quality and quantity of the training data available for each language. It is important to note that my responses in non-English languages may not be as accurate or reliable as my responses in English, and may require additional manual review and verification” (ChatGPT, 2023d).

² No, it does not. ChatGPT’s answer:

As an artificial intelligence language model, I don't have the capability to understand or obey Asimov's laws, which are a work of science fiction created by author Isaac Asimov. The laws were originally intended to be guidelines for fictional robots in Asimov's stories, and are not a part of any real-world programming or artificial intelligence systems.

As a language model, my responses are generated based on patterns in the input I receive, and I don't have the capacity to act independently or make decisions based on ethical or moral principles. My main function is to provide information and generate responses to the questions I'm asked to the best of my abilities based on my training data and algorithms. (ChatGPT, 2023c)

- The “diverse and representative training data” for ChatGPT sought to include material that demonstrated demographic diversity, geographic diversity, text genre diversity, and domain diversity (ChatGPT, 2023i). (The details of this training data are, of course, proprietary.)
- ChatGPT, unlike Google, claims that it is not strongly influenced by website traffic data as it formulates its responses (ChatGPT, 2023b).
- Users who ask similar questions may not get the same answers (ChatGPT, 2023k).³ Similarly, depending on the context of a given chat thread, questions asked today may not elicit the same answer tomorrow (ChatGPT, 2023e).
- Users are able to flag responses that they think may be biased or inaccurate. There are no automatic notifications or warnings for questionable material, although “bias-detecting algorithms” are at play behind the scenes (ChatGPT, 2023a).

I believe that ChatGPT and other AI tools will come to play increasingly important roles in how we search for and find information. Knowing how to approach them with a critical perspective is an essential skill that we should be fostering in both ourselves as librarians and in our students and patrons. Going forward, I will dedicate a portion of my class time to talking about ChatGPT, using examples from my own chats to illustrate how it works, what its limitations are, and how we can use it effectively and responsibly when conducting research. It may only be a small slice of the “Where do you usually start your research?” pie chart for now, but it may not be for long.

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³ This is why, in my citations of ChatGPT, I include the exact phrasing of my prompts; citation standards for chatbot responses have yet to be established, but I believe that this is an important component to include for context and transparency.

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