
Researchers, Instructors, & Staff Scholarship

2024

Promoting AI Literacy in Library Research Guides: Practical and Ethical Considerations

Daniela Solomon

Case Western Reserve University, dxs594@case.edu

Shatha Baydoun

Case Western Reserve University, sxb1451@case.edu

Author(s) ORCID Identifier:

 Daniela Solomon

Follow this and additional works at: <https://commons.case.edu/staffworks>

 Part of the [Information Literacy Commons](#)

Recommended Citation

Baydoun, S., Samarakoon, T., & Solomon, D. (2024, July 10). Promoting AI Literacy in Library Research Guides: Practical and Ethical Considerations. Presented at the Generative AI in Libraries (GAIL) Virtual Conference, June 11-13, 2024. <https://doi.org/10.17605/OSF.IO/VDUTH>

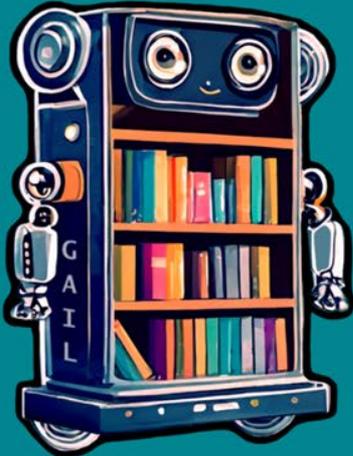
This Presentation is brought to you for free and open access by Scholarly Commons @ Case Western Reserve University. It has been accepted for inclusion in Researchers, Instructors, & Staff Scholarship by an authorized administrator of Scholarly Commons @ Case Western Reserve University. For more information, please contact digitalcommons@case.edu.

CWRU authors have made this work freely available. [Please tell us](#) how this access has benefited or impacted you!

GAIL CONFERENCE 2024

GENERATIVE AI IN LIBRARIES

Promoting AI Literacy in
Library Research Guides:
Practical and Ethical Considerations



Daniela Solomon, Case Western Reserve University
Shatha Baydoun, Case Western Reserve University
Thilani Samarakoon, University of Miami
June 13, 2024

Study Motivation

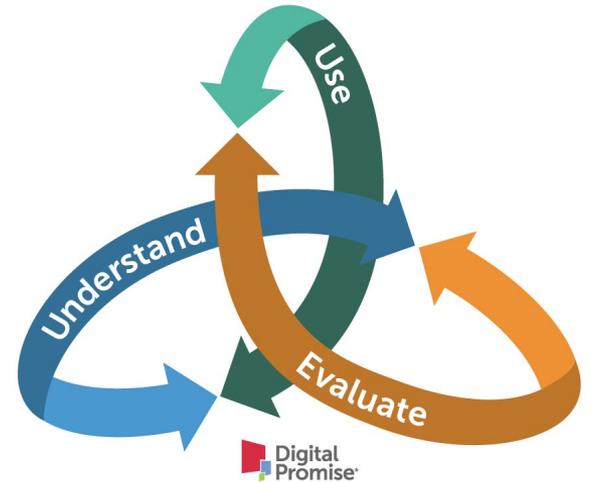
- ❑ Develop an AI guide at our library
- ❑ Investigate AI research guides at R1 universities
- ❑ Determine best practices for AI research guides

Preliminary Results

- ❑ Investigated 146 R1 universities
- ❑ Guides present a variety of AI tools, with ChatGPT being the most popular
- ❑ Guides content demonstrate different levels of AI knowledge
- ❑ Large diversity in discussing AI literacy issues

AI Literacy and Guiding Frameworks

- ❑ “AI literacy includes the knowledge and skills that enable humans to critically understand, use, and evaluate AI systems and tools to safely and ethically participate in an increasingly digital world” ([Digital Promise](#))
- ❑ AI Literacy Framework*
 - ❑ Know & understand AI
 - ❑ Use & apply AI
 - ❑ Evaluate & create [with or in] AI
 - ❑ AI ethics



* Ng, D. T. K., Leung, J. K. L., Chu, S. K. W., & Qiao, M. S. (2021). Conceptualizing AI literacy: An exploratory review. *Computers and Education: Artificial Intelligence*, 2, 100041.

[Digital Promise](#)

Prompt Design

❑ Definition

- ❑ “Refers to the process of creating prompts that elicit the desired response from language models.”

❑ Examples

- ❑ Florida International University

“A prompt is a set of instructions used to ask a language model to perform a task.”

- ❑ University of California-Irvine

“A prompt is - a topic that guides your writing content.”

Prompt Design in Research Guides

❑ General Suggestions

- ❑ Give some context or a role to play
- ❑ Provide detailed instructions, including how you would like the results formatted
- ❑ Keep conversing and asking for changes

❑ Prompt Example

- ❑ Act as an expert academic librarian. “I’m writing a research paper for Sociology and I need help coming up with a topic. I’m interested in topics related to climate change. Please give me a list of 10 topic ideas related to climate change.”

Biases in AI

- ❑ Algorithmic
- ❑ Selection/Training
- ❑ Racial
- ❑ Misinformation/Disinformation

Algorithmic and Selection Biases

❑ Definition

- ❑ Algorithmic transparency is openness about the purpose, structure and underlying actions of the algorithms used to search for, process and deliver information
- ❑ Selection/training bias: type of error in which certain elements of a dataset are more heavily weighted and/or represented than others
- ❑ AI systems are trained on data that is often biased

❑ Example

- ❑ “An AI system is trained on a dataset of news articles that are mostly from one political perspective, the system may be more likely to generate text that reflects that perspective.”

Racial Biases

❑ Definition

- ❑ Personal and sometimes unreasoned judgment made solely on an individual's race
- ❑ AI systems are often trained on large datasets that may not be representative of all racial groups
- ❑ If a dataset predominantly includes data from one race, the AI model will most likely not perform well for other races

❑ Example

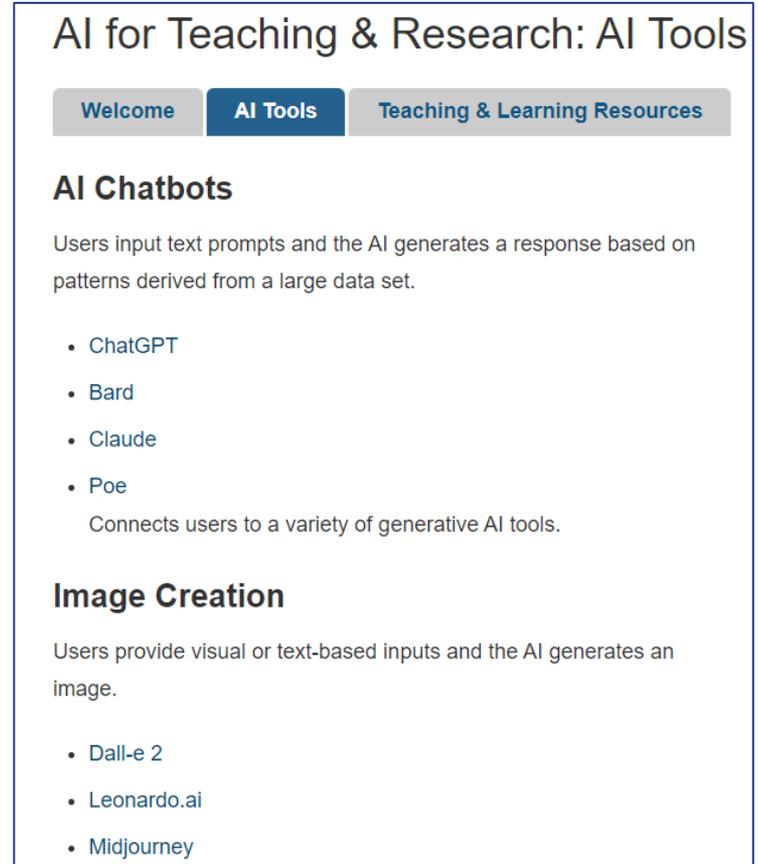
- ❑ “Training data for a facial recognition algorithm that over-represents white people may create errors when attempting facial recognition for people of color.”

Best Practices

- ❑ Definitions
- ❑ Length and Format
- ❑ AI Bias and Ethics

Best Practices: Definitions

- ❑ Generative AI and Large Language Models (LLM's)
- ❑ AI Tool Examples
- ❑ Prompt Design



The screenshot shows a website interface with a title 'AI for Teaching & Research: AI Tools'. Below the title are three navigation tabs: 'Welcome', 'AI Tools' (which is highlighted in dark blue), and 'Teaching & Learning Resources'. The main content area is divided into two sections: 'AI Chatbots' and 'Image Creation'. The 'AI Chatbots' section includes a description of user input and AI response, followed by a bulleted list of tools: ChatGPT, Bard, Claude, and Poe. A sub-section for Poe notes it connects users to various generative AI tools. The 'Image Creation' section includes a description of user input and AI image generation, followed by a bulleted list of tools: Dall-e 2, Leonardo.ai, and Midjourney.

AI for Teaching & Research: AI Tools

Welcome AI Tools Teaching & Learning Resources

AI Chatbots

Users input text prompts and the AI generates a response based on patterns derived from a large data set.

- ChatGPT
- Bard
- Claude
- Poe
 - Connects users to a variety of generative AI tools.

Image Creation

Users provide visual or text-based inputs and the AI generates an image.

- Dall-e 2
- Leonardo.ai
- Midjourney

Prompt Design

Prompt Engineering Defined

Prompt engineering is the practice of designing inputs for generative AI tools that will produce optimal outputs.

The CLEAR Framework for effective AI prompts

Dr. Leo Lo, Dean of the College of University Libraries & Learning Sciences at the University of New Mexico, has developed a framework for effective AI prompt engineering. The CLEAR framework is comprised of five characteristics.

Concise

Logical

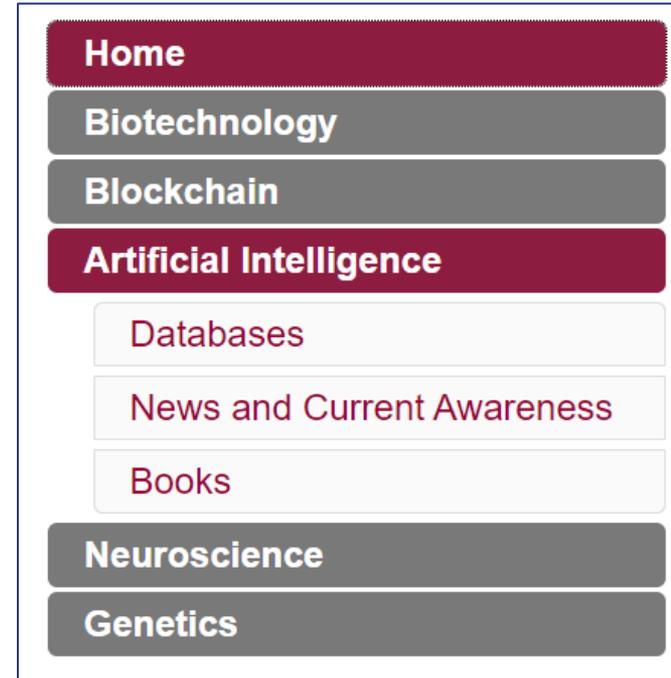
Explicit

Adaptive

Reflective

Best Practices: Length and Format

- ❑ Brief versus Detailed
- ❑ Organization



Best Practices: AI Bias and Ethics

- ❑ Present the ethical, legal, and private ramifications
- ❑ Discuss specific issues like hallucinations, privacy, copyright, racial and gender bias to foster transparency and raise awareness

AI Ethics

ETHICAL CONCERNS & CHATGPT

Ethical Privacy Legal

Bloomberg Law

The Artificial Intelligence Dilemma: Can...

Watch later Share

AI generated

AI generated

AI generated

Bloomberg Law News

A screenshot of a video player interface. At the top, there's a dark purple header with the text 'ETHICAL CONCERNS & CHATGPT' in white. Below the header, there are three tabs: 'Ethical', 'Privacy', and 'Legal', with 'Legal' being the active tab. The main content area shows a video player with a dark background. The video title is 'The Artificial Intelligence Dilemma: Can...'. There are icons for 'Watch later' and 'Share'. The video content is a collage of three images: on the left, Pope Francis in a white puffer jacket; in the center, riot police in blue uniforms; on the right, Oprah Winfrey in a black and white striped shirt. Each image has a white box at the bottom with the text 'AI generated' and a green double-checkmark icon. The Bloomberg Law logo is in the top left, and the Bloomberg News logo is at the bottom center.

Florida International University. (2024). [AI Concerns](#) [Screenshot]

AI Usage and Libraries

- ❑ To brainstorm initial ideas when writing a prompt
- ❑ To provide alternative search terms to help you find further resources in your library catalogue
- ❑ To generate practice questions to a quiz or an exam
- ❑ To help provide feedback on a samples of your writing
- ❑ To create a summary of a topic or reading

New Jersey Institute of Technology. (2024). *AI Futures*

Concluding Thoughts

- ❑ Building AI literacy is critical
- ❑ Awareness of all AI ethical aspects are important
- ❑ Including various types of LLMs has value
- ❑ Guides should be a library wide initiative

THANK YOU

Daniela Solomon
daniela.solomon@case.edu

Thilani Samarakoon
thilani.samarakoon@miami.edu

Shatha Baydoun
shatha.baydoun@case.edu