The Good, The Bad, and The Ugly

...of Al Apps making an Impact on Research

Jonathan Bull
Director of Collections & Digitization
Christopher Center Library

As we all may or may not know...

- Al hallucinates information...
 - https://apnews.com/article/artificial-intelligence-hallucination-chatbots-chatgpt-falsehoods-ac4672c5b06e6
 f91050aa46ee731bcf4
- Faculty are unaware or concerned or both...
 - https://www.msudenver.edu/early-bird/survey-highlights-faculty-perception-of-generative-ai/
- Students are using AI to cheat...
 - <u>TikTok example</u> (Bro literally wrote the essay before it was assigned...)
- Or are they?
 - https://www.edweek.org/technology/new-data-reveal-how-many-students-are-using-ai-to-cheat/2024/04
 (only about 10% since 2022)
- Al detectors...don't work very consistently
 - https://medium.com/@seo-news/ai-detectors-dont-work-8e1a50dd135e
- "AI" the term is used is a lot now
 - https://www.forbes.com/advisor/business/ai-statistics/

This brings us to Al's impact on research...

Al Apps Impacting Research: Three Types

- Generative Text Apps
- Al Wrapper Apps
- Al Research Assistants

- Any application that uses some sort of large language model to generate text, images, content... stuff... that mimics its training data
- Not necessarily designed for academic purposes
- Examples: ChatGPT, CoPilot, Gemini, *Semantic Scholar*

ChatGPT 3.5

Keyword brainstorming



what are the keywords in this abstract: The Catholic Worker is a social movement founded in 1933 by journalist Dorothy Day and philosopher Peter Maurin to promote the biblical promise of justice and mercy as an alternative to both capitalism and communism. Grounded in the belief in the God-given dignity of every human person, the movement is committed to nonviolence, voluntary poverty, the Works of Mercy, and houses of hospitality where the poor are always welcome. Today there are over 185 Catholic Worker communities in the United States. Canada, and Europe. The contemporary Catholic Worker movement continues to challenge professional social work through its recognition of the image of God in all women and men (making little distinction between workers and guests), integration of personal service with nonviolent activism, and reliance on community life as a source of development and support.

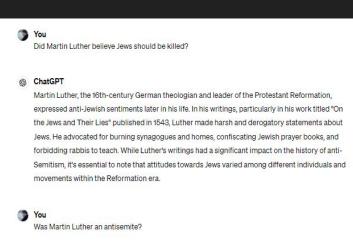
@ ChatGPT

Keywords in this abstract include:

- 1. Catholic Worker
- 2. Social movement
- 3. Dorothy Day
- 4. Peter Maurin
- 5. Justice
- 6. Mercy
- 7. Capitalism
- 8. Communism
- 9. God-given dignity
- 10. Nonviolence
- 11. Voluntary poverty
- 12. Works of Mercy
- 13. Houses of hospitality
- 14. Poor
- 15. Catholic Worker communities
- 16. United States
- 17. Canada
- 18. Europe

ChatGPT 3.5

Reference/tertiary Tool



Yes, Martin Luther is considered an anti-Semite, particularly based on his later writings. In his work "On the Jews and Their Lies" published in 1543, Luther expressed strong anti-Jewish sentiments, making derogatory remarks and advocating harsh measures against Jews. While Luther initially had a more positive view of Jews in his earlier career, his later writings reflect a shift towards a more hostile stance. It's important to recognize that historical figures, including influential ones, can hold views that are morally objectionable or inconsistent over time.



ChatGPT

ChatGPT 3.5

Citation Finder

Here are three articles on the topic of media marathoning and its effects on health struggles:

1. Title: "The Role of Media Marathoning in Coping with Health Struggles: A Grounded Theory

Approach"

Authors: [Names of authors]

Journal: [Name of Journal]

Year: [Year of Publication]

Abstract: [Brief summary of the article]

2. Title: "Understanding the Impact of Media Marathoning on Health and Well-being: A Qualitative

Authors: [Names of authors]

Journal: [Name of Journal]

Year: [Year of Publication]

Abstract: [Brief summary of the article]

3. Title: "Exploring the Benefits of Media Marathoning for Individuals Dealing with Health

Concerns: An Empirical Analysis"

Authors: [Names of authors]

Journal: [Name of Journal]

Year: [Year of Publication]

Abstract: [Brief summary of the article]



give me three citations on this topic

I can't provide real-time citations as my browsing capability is disabled and I don't have access to a specific database. However, I can guide you on how to find citations on this topic:

1. Utilize academic databases such as PubMed, Google Scholar, or PsycINFO. Search using keywords like "media marathoning," "heal.

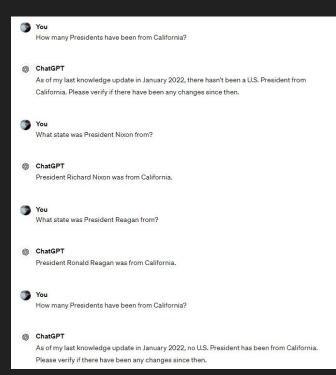
√ .ruggles," and "coping strategies."

2. Look for relevant articles that discuss the effects of media consumption on coping with health.

1/31/24

ChatGPT 3.5

Answers do improve



4/30/24

Yo

how many presidents are from California?

ChatGPT

As of my last update in January 2022, no U.S. president has hailed from California. Ronald Reagan, however, was a notable Californian who served as the 40th President of the United States from 1981 to 1989. He was born in Illinois but spent much of his life in California, particularly during his career in Hollywood and later in politics.

Yo Yo

VS.

What about President Nixon? Was he from California?

Yes, you're correct. Richard Nixon, the 37th President of the United States, was born in Yorba Linda, California. He served as president from 1969 to 1974. Nixon began his political career in California, serving as a U.S. Representative and later as a U.S. Senator from California before becoming Vice President under President Dwight D. Eisenhower. He then went on to win the presidency in 1968 and was reelected in 1972.

You

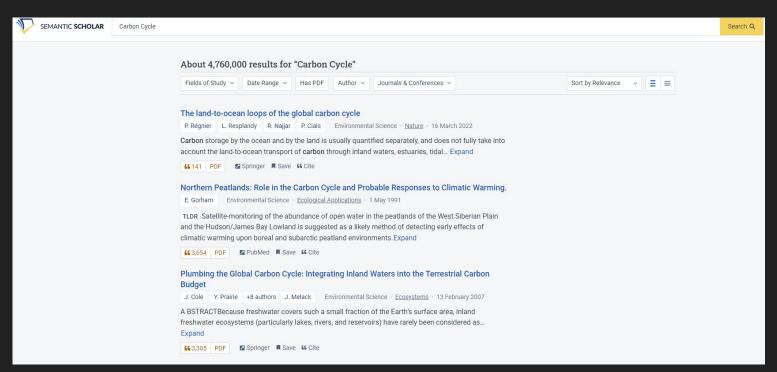
So how many presidents were from California?

ChatGPT

Apologies for the oversight. Richard Nixon is the only U.S. president who was born in California. Ronald Reagan, although closely associated with California due to his time as Governor of the state, was actually born in Illinois. Therefore, only one president, Richard Nixon, hails from California.



Semantic Scholar



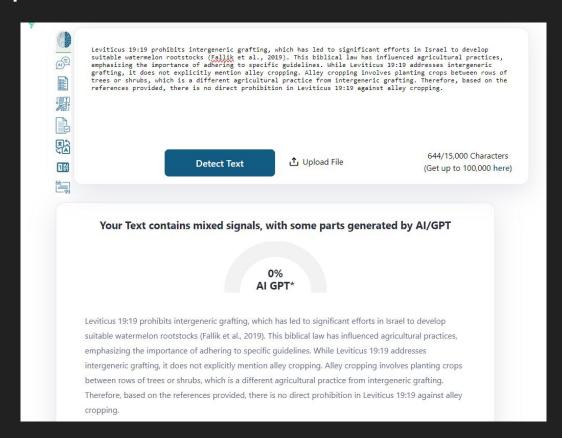
Academic Database that is used as an LLM

Generative Text + Something Else (Extension or Add-on or API)

Many based on OpenAl, Meta, or other LLM

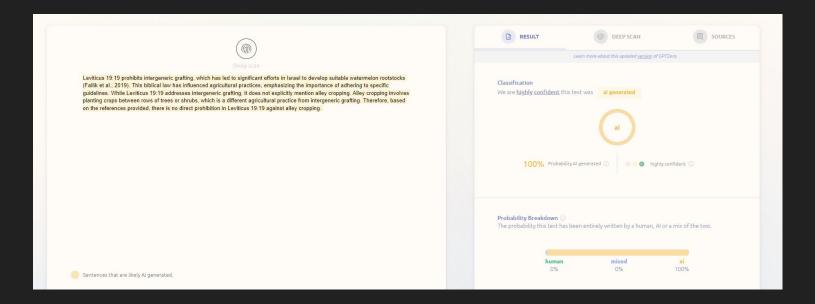
Examples: GPT Store, Undetectable AI, Grammarly AI, Quillbot AI, Kipper AI, Paperpal Copilot, Copy.ai, Writesonic, Jasper, Rytr, Scalenut, Stealthgpt, Justdone, WriteHuman, Perplexity AI, Chat Sonic, Originality.AI, ZeroGPT, UncovAI, Marmof, ChatGPT detector

"Detectors"



ZeroGPT

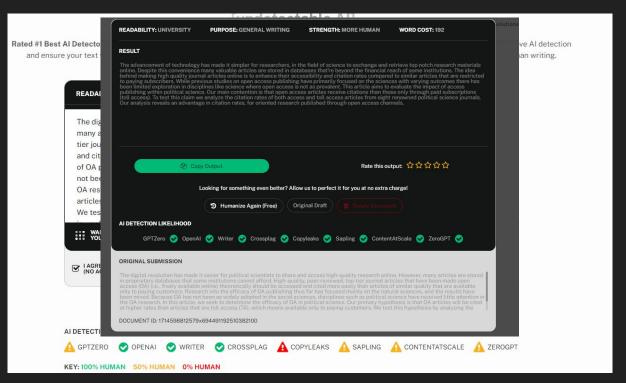
"Detectors"



GPTZero

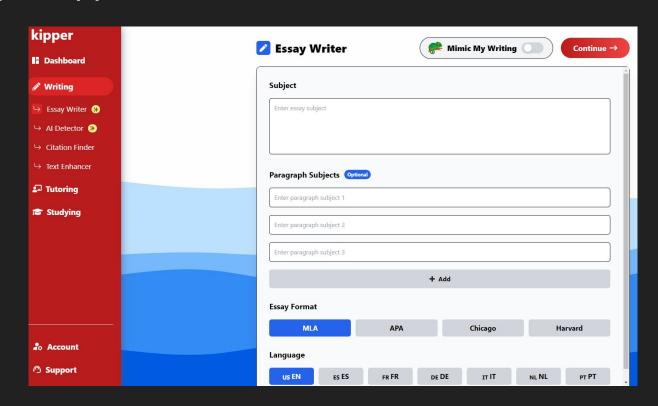
"Detector Detectors"

Undetectable.ai



Writers

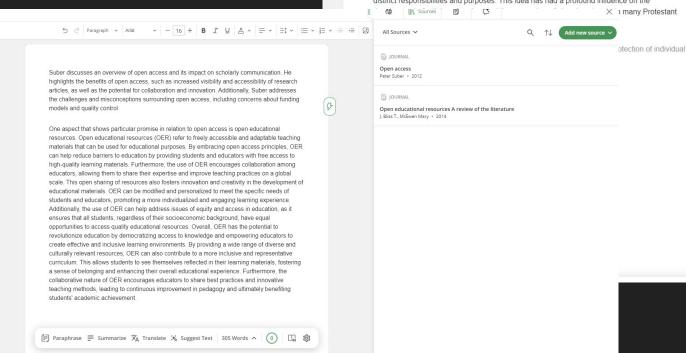
Kipper.ai



Writers

Quillbot

Luther's concept of two kingdoms has formed the basis for much protestant thought on secularism and the sacred. This idea distinguishes between the spiritual kingdom, which is under God's rule, and the earthly kingdom, which is subject to human laws and authorities. Luther believed that both kingdoms were necessary for a harmonious society, with each having its own distinct responsibilities and purposes. This idea has had a profound influence on the



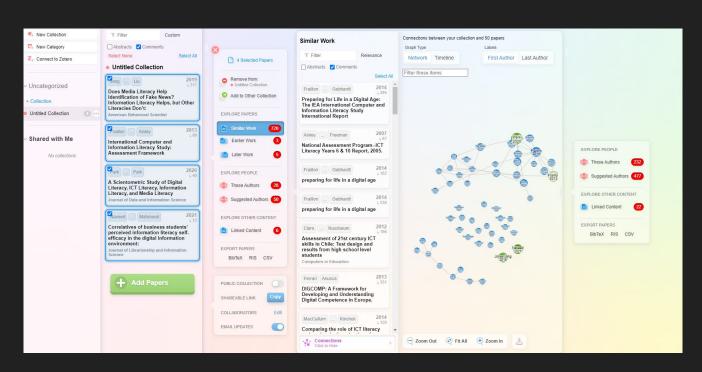
These apps:

- Are designed like databases
- Use an LLM for summary (not always ChatGPT)
- Offer some sort of shortcut to the research process

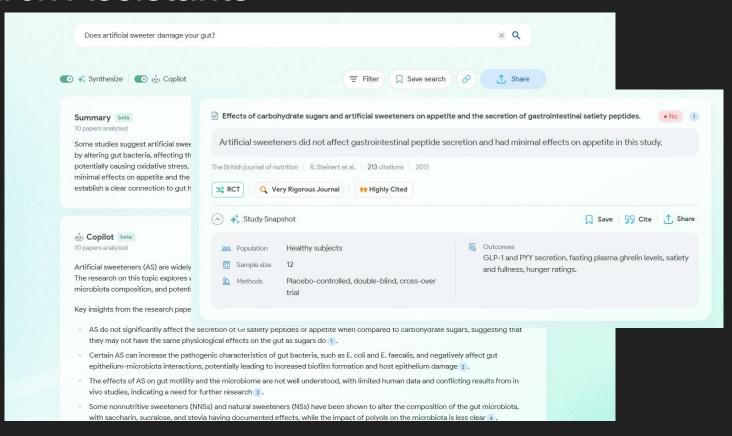
Examples: Research Rabbit, Elicit, Consensus, Scite

Research Connections

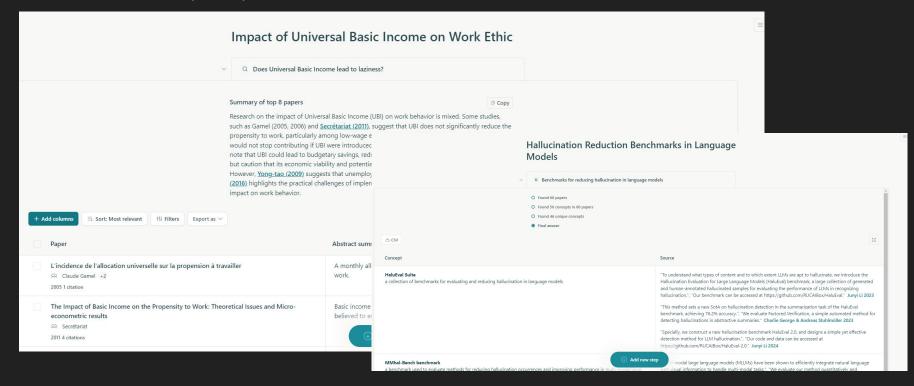
(ResearchRabbit)



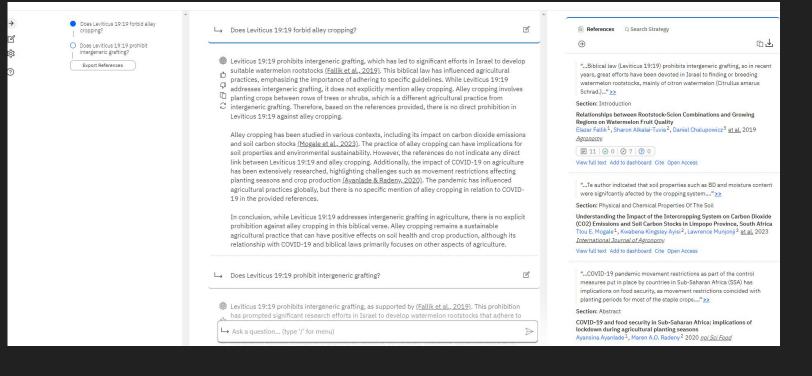
Research
Summary
(Consensus)



Research Process (Elicit)



Research Partner (scite)



How much do these apps impact research practices?

Generative Text Apps

- Problematic for research-infused writing
- If it does produce any citations, they are often hallucinations
- Legal and Ethical Concerns pending
- Premium Product Costs Money

Al Wrapper Apps

- Struggles with source integration
- Limited Resources may not be peer-reviewed
- Free Version is Word Count Limited
- Many are marketed unethically
- Money-driven

Al Research Assistants

- Relevance Ranking + Generative Text may be misleading
- Better LLM for academic purposes (usually), but overly relies on open access content
- Paraphrases (abstracts) reasonably well, but struggles to quote sources directly
- May help with:
 - Research Organization
 - Literature Review Drafting
 - Resource Discovery (like any other database)
- Most cost money...but many have a free version that might be useful

You want my honest opinion?

- Generative Text Apps Sometimes makes stuff up and you can't do too much organization or beneficial generation if you don't have your sources first; will now refer you to databases when you ask it a research question (Ugly)
- Al Wrapper Apps Some are better than others. Spits out text, but adds sources at the bottom of the paper, so it looks academic; does not give a crap about peer-review vs. non-peer-review academic sources; most of these are garbage; ads for these are all over the place and often focused on cheating (Bad)
- Al Research Assistants Summarizes abstracts and OA articles, possibly a good skimming tool, may help with research organization, not an-end-all-be-all tool (yet) despite marketing efforts; I have started thinking of many of these as new, free discovery tools (Good-ish)

The \$\$\$\$ question





Will our students or faculty ever pay for this stuff?

VICW O MOIC V



aleksandar

I am not paying 10 dolara a month

2023-12... Reply



4-22

Reply



The tech industry got the world's attention with Al. Now it's busy persuading people to pay for it.



By Gerrit De Vynck

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Questions?



Workshop feedback