# Al and the Information Professional

**Tim Leonard** 

The University of Bolton Library

@timjpleonard | t.leonard@bolton.ac.uk

# Join the Vevox session

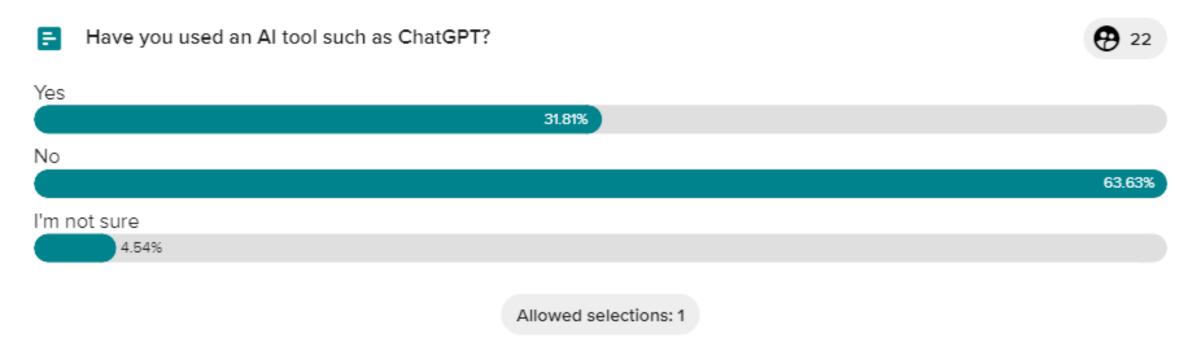
Go to vevox.app

Enter the session ID: **143-904-728** 

Or scan the QR code



# Results of the first attendee survey





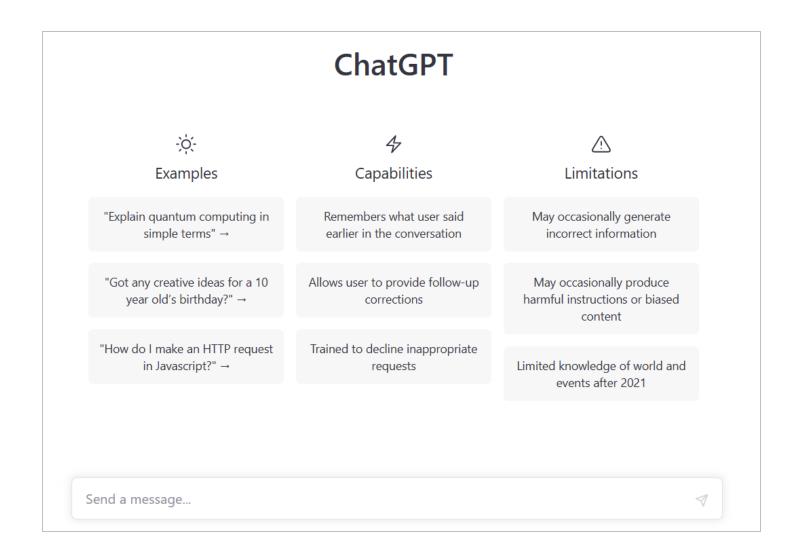
# Large Language Models

"Large Language Models (LLMs) are artificial intelligence tools that can read, summarize and translate texts and predict future words in a sentence letting them generate sentences similar to how humans talk and write"

See also: <u>The Emerging Types of Language Models and why they</u> matter, Techcrunch

# **ChatGPT**

- Launched Nov 2022 by OpenAl
- Based on the GPT-3 family of large language models
- GPT-4 now available but only for subscribers – built on a smaller dataset but more accurate



# **ChatGPT**

### ChatGPT can:

- write essays and articles
- write and debug computer programs;
- compose music, plays, fairy tales
- answer test questions (depending on the test, at a level above the average human test-taker)
- write poetry and song lyrics
- play games

OpenAI acknowledged that ChatGPT "sometimes writes plausible-sounding but incorrect or nonsensical answers" - known as "hallucination"

### **GPT-3 training data**

Dataset	# tokens	Proportion within training
Common Crawl	410 billion	60%
WebText2	19 billion	22%
Books1	12 billion	8%
Books2	55 billion	8%
Wikipedia	3 billion	3%

# "Hallucinations"

- 1."Carbon Capture and Storage: An Overview" by Michael R. Economides and Howard J. Herzog. Published in *Annual Review of Chemical and Biomolecular Engineering*, 2011.
- 2. "Carbon capture technology" by J. David Rogers. Published in *Progress in Energy and Combustion Science*, 2008.
- 3. "Carbon capture and storage: An essential technology in the fight against climate change" by Howard J. Herzog and John Larsen. Published in *Environmental Science & Technology*, 2007.

- Some of these authors exist
- Some of these journals exist
- Some of these titles have been used before
- None of these references represent a real source

# ChatGPT and Microsoft Bing

- Searching for: has chatgpt made bing more popular
- Generating answers for you...

Yes, Bing has seen a significant increase in downloads since integrating with ChatGPT. In the week since Bing announced an integration with OpenAI's ChatGPT, people have downloaded the Bing mobile app more than 750,000 times, peaking at over 150,000 installs a day 1. Microsoft tells us that its Bing search engine has hit new highs, now boasting 100 million daily active users 2. Roughly one-third of those previewing the new Bing are new to the search engine 3.

Learn more: 1. forbes.com

2. techradar.com

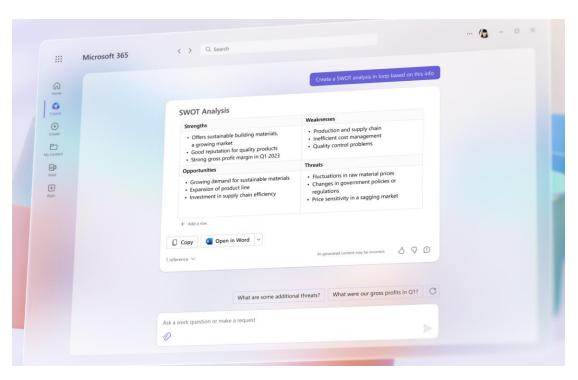
3. androidcentral.com

4. dw.com

2 of 20

# Microsoft CoPilot

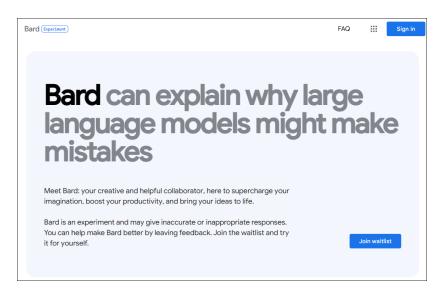
- Integrating LLM functionality into Microsoft Office applications like Outlook, Word, Teams etc
- Will be able to work with your data
- Paid subscription coming during 2023

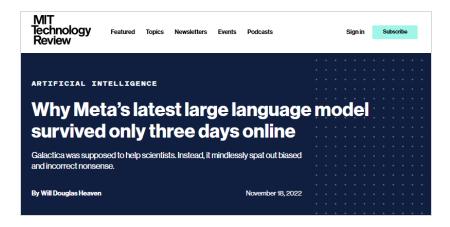


Introducing Microsoft 365 Copilot | Microsoft 365 Blog

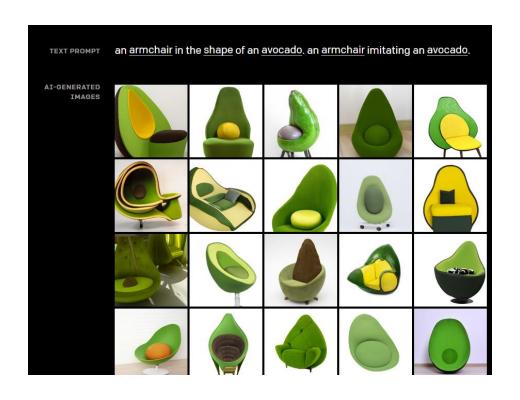
# Other competing AI projects

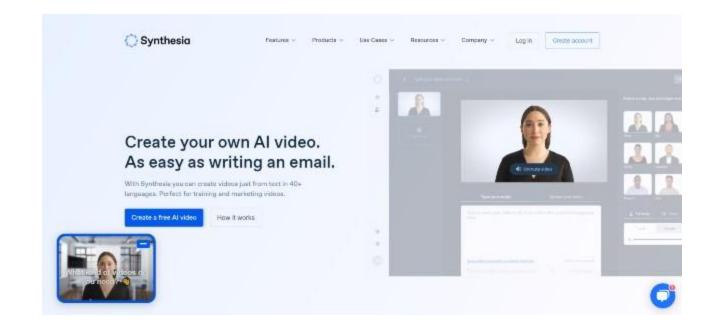
- Google's Bard
- Galactica from Meta
- Claude from Anthropic
- Other chatbots emerging using open source GPT code





# Other forms of AI Content Generation





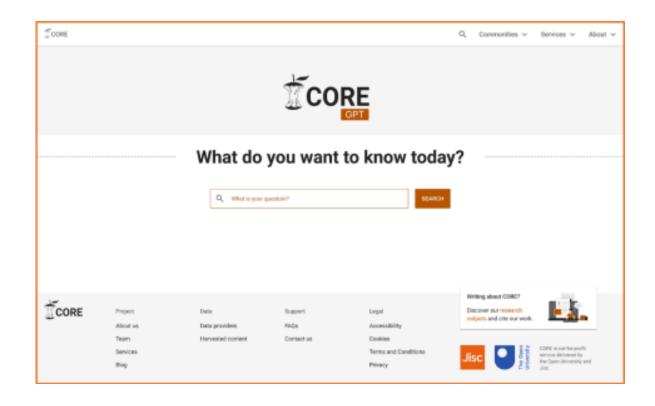
Images and Artwork: DALL-E, Stable Diffusion, Midjourney

Video: Synthesia, InVideo

# Al and literature searching

Literature mapping tools	Citation context tools	Literature scoping / management tools	Systematic review tools
Connected Papers	<u>Scite</u>	Lateral	Silvi
<u>Litmaps</u>	Semantic Scholar	Elicit	
Inciteful		<u>Iris</u>	
Research Rabbit			
Open Knowledge Maps			

### **CORE GPT**



- Based on CORE's corpus of 34 million open access scientific articles
- Provides citations and links

<u>CORE-GPT: Combining Open Access research and AI for credible, trustworthy question answering – CORE</u>

# Results from attendee survey

### What do you think are some of the OPPORTUNITIES of artificial intelligence?

More inclusive systematic review type searches using connections

Jump start a project - saving time when developing research ideas

Can't see how this is a good thing...it removes tacit knowledge and deep learning. Its the "artificial" in artificial intelligence!

Supporting comprehensive literature reviews

Saving time e.g. literature searching (suggesting key papers or journals, summarising key points)

More informal/friendly way of students engaging with technology so they may prefer this style of fact-finding and learning

Summarising and synthesising text from a range of full text articles, creating search strategies

Allow students to have a quick initial scope of whether their research idea is feasible and can be supported by evidence

Help to understand importance of checking citations/references

Potentially time saving (when it works!) Could be more accessible

Proofreading

Research topics for student EPQ & similar

Time saving

easier / quicker access to information



# Positive opportunities of Al

- Interrogate and find insights in large data sets
- To minimize repetitive tasks
- Customer service for "simple" or directional enquiries
- Personal assistant utilizing personal data to support, guide and "nudge"
- Curriculum development can be used to develop lesson plans, assessments
- A virtual teaching assistant used to summarise topics and provide feedback
- Generate examples of work for students or content to be remixed

# Results from attendee survey

# What do you think are some of the CHALLENGES of artificial intelligence?

Explaining draw backs to customers Faked information

Not understanding there may be problems with results/text created

Copyright issues. Trust in content, how to spot when something was created by an AI

Art AI is known for using thievery and diminishes the hard work of artists Students can become reliant leading to incorrect citations and supporting evidence Being reliant on the use of AI could reduce Information Literacy skills

Ensuring the results are accurate and unbiased

People will become information processors and lack knowledge!

Opportunity for cheating/plagiarism minimises student learning opportunities

Risk of bias, deepening existing digital divide, plagiarism Generating massive amounts of nonsense information that looks legit and that can't be refuted Short cut for students leading to inaccuracy Potential for bias Accuracy Spreading disinformation & misinformation Cheating- why do the work if it can do it for you Plagiarism, intellectual property Robots making us their slaves Spotting inaccuracies Plagiarism

# Challenges

- Reliability and bias
- Equity and inclusion
- Ethics
- Academic integrity
- Governance
- Disruption
- Staying ahead of the curve!!

# Panic?!

### Cheating has never been easier with ChatGPT

January 13, 2023 | Sophia Coppolino



I guess GPT-3 is old news, but playing with OpenAl's new chatbot is mindblowing. chat.openai.com/chat

We're witnessing the death of the college essay in realtime. Here's the response to a prompt from one of my 200-level history classes at Amherst

Solid A- work in 10 seconds

### Chat-GPT- is this an alert for changes in the way we deliver education?



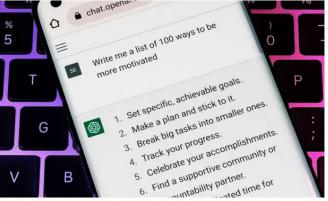
O Comments



### Lecturers urged to review assessments in UK amid concerns over new AI tool

ChatGPT is capable of producing high-quality essays with minimal human input

 ChatGPT: what can the extraordinary artificial intelligence chatbot do?



ChatGPT has already triggered concerns about the potential for hard-to-detect plagiarism and questions about the validity of the essay as a future form of assessment. Photograph:

### The New York Times

### Alarmed by A.I. Chatbots, Universities Start Revamping How They Teach

ChatGPT, which was released in November by the artificial intelligence lab OpenAI, is at the forefront of the shift. The chatbot generates...





Students Caught Cheating Using AI on Final; Academic Integrity Policy Updated

By: Jonathan Levin | News | January 5, 2023

2 days ago

### Does your library need a response/position on AI?



### **CHATGPT: A LIBRARY PERSPECTIVE**

January 27th, 2023

ChatGPT has been a hot topic since late November 2022, even surpassing AI (artificial intelligence) as a Google search term within 2 weeks of the public release. This has brought up a lot of questions about both AI and ChatGPT and the role it may play in libraries and across university campuses.

At its core, the Krupp Library team is dedicated to helping our Bryant community to access and use information as well as emerging tools and technologies, including AL. Because of this, we aren't making any decrees about whether ChatGPT is "good" or "bad." Instead, we're taking this opportunity to look at it through the lens of information literacy.

The ACRL is one of the professional organizations for librarians, and we base our information literacy instruction on the ACRL Framework. Here are some places where ChatGPT intersects with the framework:

Research as Inquiry ChatGPT is good at answering general knowledge questions that could also be found in a quick google search. It isn't always perfect, and one issue is as of this writing the program's "knowledge" ends in 2021.

Scholarship as Conversation This frame means that different opinions and perspectives are necessary to learn. ChatGPT can't actually offer opinions and isn't actually an expert in anything. However, you might be having a hard time finding information about a perspective that isn't the same as your own, or need to find "the other side" in an argument. If you phrase it correctly, ChatGPT





### ChatGPT and Fake Citations



Post by Hannah Rozear, Librarian for Biological Sciences and Global Health, and Sarah Park, Librarian for Engineering and Computer Science

Unless you've been living under a rock, you've heard the buzz about ChatGPT. It can write papers! Debug code! Do your laundry! Create websites from thin air! While it is an exciting tech development with enormous possibilities for applications, understanding what's under the hood and what it does well/not-so-well is critically important.

ChatGPT is an Artificial Intelligence Chatbot developed by OpenAI and launched for public use in November 2022. While other AI chatbots are also in development by tech giants such as Google, Apple, and Microsoft, OpenAI's early rollout has eclipsed the others for now—with the site reaching more than 100 million users in 2 months. For some perspective, this is faster widespread adoption than TikTok. Instagram, and many other popular apps.



Browse our 14 distinct library blogs

at Duke University...

Select a Blog

Collection Spotlight: Disability Pride

# How to keep up!

Identify experts in your fields of interest – eg. Teaching and learning, academic integrity etc

Statements from professional bodies and organisations

Follow stories in the mainstream or technology focused press and on social media

Updates from significant technology providers for you

### Jisc National Centre for AI in tertiary education

Really useful events and mailing list

### Aaron Tay's blog

Excellent blog by a librarian in Singapore covering emerging research tools

### Dr Phillipa Hardman

Cambridge based educator – has excellent Twitter and LinkedIn plus (paid) Substack newsletter

### **Sentient Syllabus**

Course design materials

# Find the conversation in your organisation

- Where might conversations about applications of AI be happening in your organisation?
- And in what context?
- What aspects and application of AI might your stakeholders be interested in?
- Help others learn while you learn yourself

# Final thoughts

- Its OK to not have all the "answers" no-one does!
- Focus on your areas of interest/expertise: e.g. information literacy, ethics, academic integrity etc
- Organisations will need people to make sense of this technology for their context
- Librarians are experts at helping other people utilise technology
- Information literacy has never been more relevant