



AI and Libraries

Avery Swartz
Founder & CEO, Camp Tech



Download these slides

(as a PDF file):

<https://camptech.ca/ABPQ-AI>



AI is everywhere

In the Last 24 Hours, Have You...

- Unlocked your smartphone with your face?
- Used auto-complete in text messaging?
- Scrolled social media?
- Used Google Maps or Waze for directions?
- Logged in to online banking?
- Listened to a song that Spotify suggested?
- Used spell check?
- Asked a voice assistant to set a timer?
- Called an Uber?
- Charged your smartphone?



Is AI going to kill us all?

A.I. Poses 'Risk of Extinction,' Industry Leaders Warn

Leaders from OpenAI, Google DeepMind, Anthropic and other A.I. labs warn that future systems could be as deadly as pandemics and nuclear weapons.

 Share full article    1.4K










Executives from three of the leading A.I. companies, including Sam Altman, chief executive of OpenAI, have signed an open letter warning of the risks of artificial intelligence. Jim Lo Scalzo/EPA, via Shutterstock

The screenshot shows a news article on a dark-themed website. At the top left is the 'THE GLOBE AND MAIL' logo. To its right is a 'FLASH SALE' badge showing a price change from \$7.99 to \$0.99/week, followed by 'REGISTER' and 'LOG IN' buttons. A search icon and a share icon are also present. Below the navigation bar is a horizontal menu with categories: CANADA, WORLD, BUSINESS, INVESTING, WATCHLIST, PERSONAL FINANCE, OPINION, POLITICS, SPORTS, LIFE, ARTS, DRIVE, REAL ESTATE, and PODCASTS. The main content area features the word 'TECHNOLOGY' in orange. The headline is '‘I hope I’m wrong’: Why some experts see doom in AI' in large white font. Below the headline is a sub-headline: 'The notion is not new, but it has more recently been confined to science fiction and heady philosophy debates'. The author is 'JOE CASTALDO' from 'THE GLOBE AND MAIL', published on 'JUNE 23, 2023'. At the bottom of the article are three icons: a speech bubble for '76 COMMENTS', an upward arrow for 'SHARE', and a bookmark icon for 'BOOKMARK'. The background of the article is a portrait of Professor Geoffrey Hinton. Below the article content is a white box containing a caption: 'Professor Geoffrey Hinton, widely considered the "godfather of AI". RAINA+WILSON/THE GLOBE AND MAIL'.





SALE: Only \$0.50/week!
Subscribe NowSign In 

 Newsletters  Today's Paper NORTHSTAR  BETS 

HOME GTA CANADA POLITICS WORLD OPINION LIFE SPORTS ENTERTAINMENT BUSINESS INVESTIGATIONS PODCASTS

Small Business Technology Personal Finance Innovation


Home / Business


BUSINESS OPINION

AI is almost certainly coming for your job. Here's what you can do to protect it

To survive in the artificial intelligence future, writes Navneet Alang, it is important to know thy enemy by familiarizing yourself with the readily available tools like ChatGPT.

By **Navneet Alang** Contributing Columnist

Saturday, August 5, 2023 |  3 min to read

 Article was updated Aug 5, 2023

https://www.thestar.com/business/ai-is-almost-certainly-coming-for-your-job-here-s-what-you-can-do-to/article_b5086b92-bfc6-5d2d-9b3d-a5fa0a15186d.html

Support the Guardian
Fund independent journalism with \$5 per month

The Guardian

[Support us](#) →

[News](#) |
 [Opinion](#) |
 [Sport](#) |
 [Culture](#) |
 [Lifestyle](#) |
 [More](#) ▾

World UK Climate crisis Ukraine Environment Science Global development Football **Tech** Business Obituaries

Artificial intelligence (AI)



Interviews by
Steve Rose

@steverose7
Fri 7 Jul 2023 05:00 BST





Five ways AI might destroy the world: 'Everyone on Earth could fall over dead in the same second'





Is AI going to save the world?



CAMILLE BROMLEY

BACKCHANNEL

AUG 29, 2023 6:00 AM

How to Use AI to Talk to Whales—and Save Life on Earth

With ecosystems in crisis, engineers and scientists are teaming up to decipher what animals are saying. Their hope: By truly listening to nature, humans will decide to protect it.

SAVE

BEFORE MICHELLE FOURNET moved to Alaska on a whim in her early twenties, she'd never seen a whale. She took a job on a whale watching boat and, each day she was out on the water, gazed at the grand shapes moving under the surface. For her entire life, she realized, the natural world had been out there, and she'd been missing it. "I didn't even know I was bereft," she recalls. Later, as a graduate student in marine biology, Fournet wondered what else she was missing. The humpbacks she was getting to know revealed themselves in partial glimpses. What if she could hear what they were saying? She dropped a hydrophone in the water—but the only sound that came through was the mechanical churn of boats. The whales had fallen silent amid the racket. Just as Fournet had




☰ CBS NEWS 🔍

U.S. >

How AI technology could be "a game changer" in fighting wildfires

By David Schechter, Haley Rush, Chance Horner
July 17, 2023 / 11:07 AM EDT / CBS News

f t □



TREATMENTS

AI could help doctors make better diagnoses

OCTOBER 25, 2023 · 5:12 AM ET

HEARD ON MORNING EDITION

By Craig LeMoult



Dr. Michael Mansour, an infectious disease specialist at Massachusetts General Hospital, is testing an AI-enhanced database he uses to help make diagnoses.

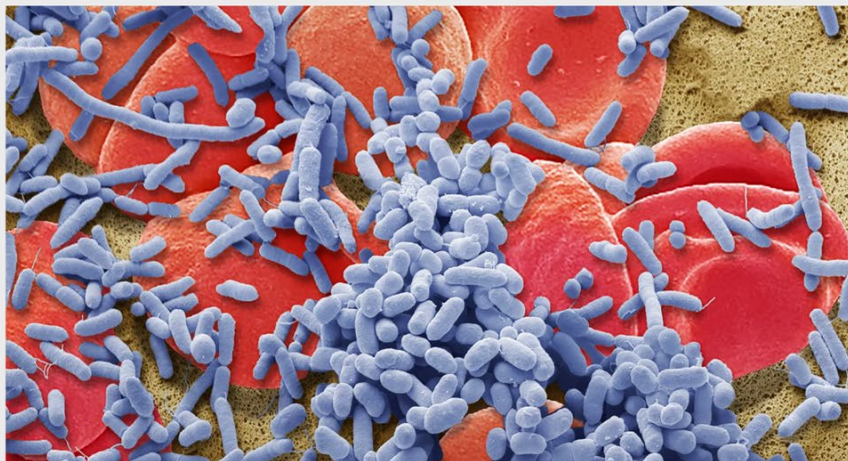
Craig LeMoult/GBH

<https://www.npr.org/sections/health-shots/2023/10/25/1208326892/ai-help-doctors-make-better-diagnoses-uptodate-artificial-intelligence>

Algorithm That Detects Sepsis Cut Deaths by Nearly 20 Percent

Over two years, a machine-learning program warned thousands of health care providers about patients at high risk of sepsis, allowing them to begin treatments nearly two hours sooner

BY [SOPHIE BUSHWICK](#)



<https://www.scientificamerican.com/article/algorithm-that-detects-sepsis-cut-deaths-by-nearly-20-percent/>



Is AI bad? Is AI good?

Is it both?

Either way, it's not going away.



How libraries are using AI

How libraries are using AI

- Algorithms that influence discoverability in digital catalogues (such as Libby)
- OCR (optical character recognition) of text inside images and scans
- Automated storage and retrieval systems
- Streamlined cataloging and indexing
- Analysis of circulation and usage records
- Chatbots to help patrons search
- ChatGPT and generative AI tools for marketing and communications



The AI Knowledge Gap



22% of Americans say they interact with artificial intelligence almost constantly or several times a day. Another 27% say they interact with AI about once a day or several times a week.

Half of Americans think they interact with AI less often.

Source: Pew Research, March 2024

<https://www.pewresearch.org/short-reads/2024/03/26/many-americans-think-generative-ai-programs-should-credit-the-sources-they-rely-on/>

Libraries and AI Literacy

- General AI literacy
- Algorithmic literacy
- Media and information literacy
- Personal data management & privacy
- Tool-based literacy



Let's explore Generative AI together

Generative AI (GenAI)

- A sub-field of machine learning:
 - Trained on a lot of **input data**
 - **Learns** (and improves) through trial and error, feedback, and lots of practice
 - Really good at identifying **patterns**

Generative AI (GenAI)

- **Generates new data** (text, imagery, audio, video, code) similar to what it was trained on
- Calculates what the next piece of data could be, based on **probability and prediction** models
- Generative AI doesn't "think," it "predicts"

Generative AI (GenAI)

- Examples:
 - ChatGPT
 - Microsoft CoPilot
 - Google Gemini
 - Claude
 - Perplexity
 - DALL·E, Midjourney
 - Canva Magic Studio
 - Otter AI
 - Synthesia
 - Jasper



ChatGPT

- ChatGPT (made by OpenAI)
<https://chat.openai.com/>
- ChatGPT 3.5 is free; ChatGPT 4 is paid
- When you first use it, it's going to stink
- Needs to be trained to be effective



Prompting

The quality of the prompt determines the quality of the response!

The best prompts have these 4 components:

1. Roles
2. Context
3. Question or task
4. Instructions



Tell me about libraries and AI



Libraries and AI: A Relationship Enriched by Data and Technology



Overview

Libraries have traditionally been centers for information acquisition and knowledge dissemination. With the advent of Artificial Intelligence (AI), the role and functionality of libraries have experienced substantial enhancements. AI technologies empower libraries to provide better services, manage collections more effectively, and offer personalized experiences to users.

Application of AI in Libraries

1. User Experience:

- **Chatbots and Virtual Assistants:** Assist users in finding resources and provide answers to queries.
- **Recommendation Systems:** Utilize user data and preferences to suggest books, articles, and other resources.

2. Collection Management:

- **Automated Sorting and Shelving:** Employ robots and automated systems for sorting and shelving books.
- **Digital Archiving:** Utilize AI to digitize, organize, and manage archives, ensuring easy retrieval.

3. Data Analysis:

- **User Behavior Analysis:** Analyze user behavior to understand their needs and modify

Regenerate

Send a message





✦ GPT-4



You are an expert in adult learning principles. I am delivering a presentation about artificial intelligence and its uses for a group of professionals who work in public libraries. Give me 1 example or anecdote about libraries and AI that I should consider including in my presentation. This example or anecdote should be no longer than 75 words.



Consider the example of how AI can enhance user experience in libraries: In some institutions, AI chatbots, like the one implemented in the San Jose Public Library, assist patrons 24/7, answering inquiries, helping navigate the catalog, and offering reading recommendations. This technological advancement not only optimizes customer service but also allows human staff to focus on more intricate tasks, bridging the gap between traditional library services and the digital era, and exemplifying AI's potential to revolutionize public service sectors.





Beware of “hallucinations.” Generative AI tools may produce incorrect answers if unsure. Instead of stating that they do not know the answer, they often generate a response that sounds confident but is incorrect.

ChatGPT: US lawyer admits using AI for case research

By Kathryn Armstrong
BBC News

A New York lawyer is facing a court hearing of his own after his firm used AI tool ChatGPT for legal research.

A judge said the court was faced with an "unprecedented circumstance" after a filing was found to reference example legal cases that did not exist.

The lawyer who used the tool told the court he was "unaware that its content could be false".

ChatGPT creates original text on request, but comes with warnings it can "produce inaccurate information".

The original case involved a man suing an airline over an alleged personal injury. His legal team submitted a brief that cited several previous court cases in an attempt to prove, using precedent, why the case should move forward.

But the airline's lawyers later wrote to the judge to say they could not find several of the cases that were referenced in the brief.

"Six of the submitted cases appear to be bogus judicial decisions with bogus quotes and bogus internal citations," Judge Castel wrote in an order demanding the man's legal team explain itself.



Images created with Generative AI



Generative AI Images

- DALL·E 3 (available through ChatGPT Plus)

<https://chat.openai.com/>

- Stable Diffusion

<https://stablediffusionweb.com/#demo>

- Midjourney

<https://www.midjourney.com/>



ChatGPT 4 ▾

**You**

make me a digital art style image of an astronaut playing basketball with cats in space

**ChatGPT**

Here's a digital art image of an astronaut playing basketball with cats in space. This whimsical and vibrant scene captures the astronaut and playful cats floating in zero gravity against a backdrop of a starry cosmos.



Message ChatGPT...





But what about
copyright?



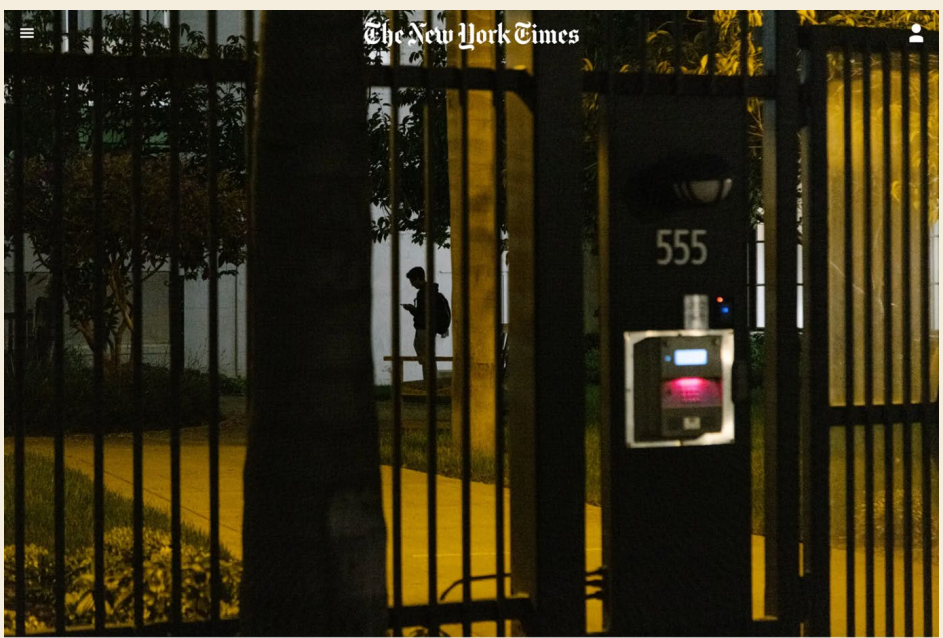
Law & Politics

In a Blow for Artists, a Federal Judge Has Sided With Three A.I. Companies in a Copyright Dispute

The class action suit was filed by three artists—Sarah Andersen, Kelly McKernan, and Karla Ortiz.

Adam Schrader, October 31, 2023





Researchers at OpenAI's office in San Francisco developed a tool to transcribe YouTube videos to amass conversational text for A.I. development. Jason Henry for The New York Times

How Tech Giants Cut Corners to Harvest Data for A.I.

OpenAI, Google and Meta ignored corporate policies, altered their own rules and discussed skirting copyright law as they sought online information to train their newest artificial intelligence systems.



By **Cade Metz, Cecilia Kang, Sheera Frenkel, Stuart A. Thompson and Nico Grant**

Reporting from San Francisco, Washington and New York

April 6, 2024

<https://www.nytimes.com/2024/04/06/technology/tech-giants-harvest-data-artificial-intelligence.html?>



The Times Sues OpenAI and Microsoft Over A.I. Use of Copyrighted Work

Millions of articles from The New York Times were used to train chatbots that now compete with it, the lawsuit said.

Share full article



1.3K



A lawsuit by The New York Times could test the emerging legal contours of generative A.I. technologies. Sasha Maslov for The New York Times



By Michael M. Grynbaum and Ryan Mac

Dec. 27, 2023

<https://www.nytimes.com/2023/12/27/business/media/new-york-times-open-ai-microsoft-lawsuit.html>



MENU ▾

[Canada.ca](#)

Government of Canada launches consultation on the implications of generative artificial intelligence for copyright

From: [Innovation, Science and Economic Development Canada](#)

News release

Feedback will contribute to copyright policy development

October 12, 2023 – Ottawa, Ontario

The Government of Canada is committed to ensuring that Canada's legislative frameworks remain responsive to modern realities. That is why the government proposed the Artificial Intelligence and Data Act, as part of Bill C-27, and continues to consider how other legislative frameworks may need to be updated to address the changing technological landscape, including the rapid advancement of artificial intelligence (AI) technologies.

Today, the Honourable François-Philippe Champagne, Minister of Innovation, Science and Industry, and the Honourable Pascale St-Onge, Minister of Canadian Heritage, launched a consultation to gather Canadians' thoughts on generative AI tools and the implications for copyright holders to give consent and receive credit and compensation for the use of their works.



DALL-E

History

Collections



Edit the detailed description

Surprise me

Upload



librarian superhero

Generate





ChatGPT 4 ▾

 **You**
make me a cartoon style illustration of a librarian superhero

 **ChatGPT**



Here is a cartoon-style illustration of a librarian superhero. This character is designed with a vibrant costume, a cape, glasses, and a book-themed emblem, standing heroically in a library setting.



 Message ChatGPT...





Biased much?



**Algorithmic bias
occurs when a computer
system reflects the implicit
values of the humans who
created it.**



Generative AI for translation







AI Use Policies






**56% of workers are using
generative AI on the job,
but only 26% of companies
have established AI policies**

Source: The Conference Board, Sept 2023
<https://www.conference-board.org/press/us-workers-and-generative-ai>

AI Use Policy Considerations

- Where are you going to use AI?
- Which tools will you use?
- Who is using AI?
- What's the plan for reviewing, verifying, and approving the work?
- Plan for documentation?
- Plan for disclosure?
- Compliance with local regulations?



 **Sam Altman** 
@sama 

No one knows what happens next.

8:34 PM · Feb 27, 2022



Resources

Articles, Glossaries, Briefs

- Explorations of Generative AI for Library Systems, Urban Libraries Council, October 2023
https://www.urbanlibraries.org/files/AI_Leadership-Brief_October2023.pdf
- 5-part series “How to Become an Expert on A.I.” *The New York Times*, April 2023
<https://www.nytimes.com/article/ai-artificial-intelligence-chatbot.html>
- The A to Z of Artificial Intelligence (Glossary), *TIME*, April 2023
<https://time.com/6271657/a-to-z-of-artificial-intelligence/>
- School Librarians Explore Possibilities of ChatGPT, *School Library Journal*, January 2023
<https://www.slj.com/story/School-Librarians-Explore-Possibilities-of-ChatGPT>

AI Use Policy Resources

- Aspen Digital's generative AI guidance for organizations
https://www.aspendigital.org/wp-content/uploads/2023/09/Aspen-Digital_Navigating-Uncharted-Waters_September-2023.pdf
- AI Compliance: How to Safely Use AI for Marketing
<https://blog.hootsuite.com/ai-compliance/>
- Guide to creating an AI use policy (and template)
<https://writer.com/blog/corporate-ai-policy/>
- Government of Canada's guide on the use of generative AI
<https://www.canada.ca/en/government/system/digital-government/digital-government-innovations/responsible-use-ai/guide-use-generative-ai.html>



Online News

- *New York Times* 'AI section
<https://www.nytimes.com/spotlight/artificial-intelligence>
- *Platformer*
<https://www.platformer.news/>
- The AI Tool report (daily email)
<https://aitoolreport.beehiiv.com/subscribe>



Free Online Courses

- Elements of AI: Introduction to AI Course (MOOC from University of Helsinki)
<https://www.elementsofai.com/>
- Generative AI training from Google Cloud
<https://cloud.google.com/blog/topics/training-certifications/new-generative-ai-trainings-from-google-cloud>
- IBM's Skillsbuild platform - AI pathway
<https://skillsbuild.org/adult-learners/explore-learning/artificial-intelligence>



Books

- *Prediction Machines, Updated and Expanded: The Simple Economics of Artificial Intelligence*
by Ajay Agrawal, Joshua Gans, Avi Goldfarb
(Harvard Business Review Press, 2022)
- *Filterworld: How Algorithms Flattened Culture*
by Kyle Chayka (Doubleday, 2024)
- *Unmasking AI: My Mission to Protect What Is Human in a World of Machines*
by Joy Buolamwini (Random House, 2023)
- *Algorithms of Oppression: How Search Engines Reinforce Racism*
by Safiya Umoja Noble (NYU Press, 2018)



Download these slides

(as a PDF file):

<https://camptech.ca/ABPQ-AI>