What Up With A.I.

Al Peterson

Image created by NightCafe, A.I. Generated Art by Al Peterson

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What Up With A.I.

If you are in this session by mistake, please return to the main room and send a chat to Cindy Olson so we can move you into the right room.

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What Up With A.I.

When you hear the words Artificial Intelligence, would comes to mind?

- Excitement?
- Curiosity?
- Acceptance?
- Brave New World?

Y Chino (2023) *What is AI and how will it change our lives? NPR Explains.*
https://www.npr.org/2023/05/25/1177700852/ai-future-dangers-benefits

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What else comes to mind?

- Fear?
- Distrust?
- Trepidation?

The Teminator Fans (2022) *Terminator 2 Contains One of the Most Accurate Depictions of a Nuclear Blast.* https://www.theterminatorfans.com/terminator-2-contains-one-of-the-most-accurate-depictions-of-a-nuclear-blast/

What Up With A.I.

What is Artificial Intelligence?

Artificial intelligence (A.I.) is a wide-ranging branch of computer science concerned with building smart machines capable of performing tasks that simulate human intelligence and problem-solving capabilities.

A.I. encompasses machine learning and deep learning, involving the development of algorithms modeled after human decision-making processes

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What Up With A.I.

What is the ~~difference~~ connection between A.I., Deep Learning, and Machine Learning

A.I. refers to computer software that mimics human cognitive abilities to perform complex tasks like decision-making and data analysis

A.I. is the overarching concept of creating human-like cognition in machines, while machine learning is a specific method within A.I. that involves training algorithms with data to perform tasks and improve their performance over time.

- Machine Language is a subset of A.I. that uses algorithms trained on data to produce models capable of performing tasks.

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What Up With A.I.

What is the ~~difference~~ connection between A.I., Deep Learning, and Machine Learning

Deep learning is a subset of Machine Learning that can be taught to perform classification tasks and recognize patterns in photos, text, audio and other various data. It is also used to automate tasks that would normally need human intelligence, such as describing images or transcribing audio files.

The term "deep" refers to the multiple layers through which the data is transformed. Deep learning architectures, such as deep neural networks (DNNs), convolutional neural networks (CNNs), and recurrent neural networks (RNNs), have shown remarkable success in various tasks, including image and speech recognition, natural language processing, autonomous driving, and more.

What Up With A.I.

Deep Learning Applications:

- Facial and Biometric Recognition Software

- Customer Relationship Management

- Voice Recognition

- Autonomous Vehicles

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What Up With A.I.

Generative A.I. is a type of artificial intelligence that creates new data, such as images, text, and music, based on patterns found in existing data. It works by learning the underlying structure of the data and then using that structure to generate new content.

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What Up With A.I.

Advantages of A.I.

Saving Time

- Coding

- Caller Assistance

Creating Decision Models and reducing Human Error.

- Weather prediction models

- Software testing

- Military applications

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What Up With A.I.

Advantages of A.I.

Automates Repetitive Tasks and Processes.

- Invoice generation

- Data collection

- Manufacturing

    - Available 24/7 and doesn't need breaks or lunch

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Advantages of A.I.

Faster Decision and computation

- Number crunching.
- Predictive analytics- analyze historical data, identify patterns, and make accurate predictions.
  - Voter information
  - Customer Behavior

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What Up With A.I.

Disadvantages of A.I.

Cost of developing A.I. programs.

Lack of Mental Agility and lack of common sense.

- Mapping systems such as Google Maps.

A.I. Mistakes A.I. is prone to making mistakes.

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What Up With A.I.

Disadvantages of A.I.

A.I. Mistakes are also known as Hallucinations.

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A.I. Hallucinations

Misinterpreting the prompt

OK, here is music by Black Sabbath

Alexa, play music by Kidz Bop

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A.I. Hallucinations

A.I. systems are good at following instructions, but they can still misunderstand what you're asking them to do.

This can lead to an AI making something up that fits what it thinks you want, even if it's not accurate.

- Based on past patterns.

- This has led to some very interesting playlists on Alexa.

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A.I. Hallucinations

Bad Data

If the data is faulty or incomplete, then AI can learn the wrong things and provide the wrong answer.

A.I. can provide information that may sound plausible, but just isn't true.

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A.I. Hallucinations

Michael Cohen, Donald Trump's onetime personal lawyer and fixer, says he unwittingly passed along to his attorney bogus artificial intelligence-generated legal case citations he got online before they were submitted to a judge. Cohen made the admission in a court filing unsealed Friday in Manhattan federal court after a judge earlier this month asked a lawyer to explain how court rulings that do not exist were cited in a motion submitted on Cohen's behalf.

Cohen said in a declaration submitted to the judge on Thursday that he found the citations by doing research through Google Bard (now Gemini) and was unaware that the service could generate nonexistent cases. Cohen, who was disbarred five years ago and no longer has access to formal legal-research sources.

Ex-trump lawyer Cohen says he unwittingly sent AI-generated fake legal cases to his attorney. (2023, Dec 29). *Sun Journal* Retrieved from http://odinproxy010.odin.nodak.edu/login?url=https://www.proquest.com/newspapers/ex-trump-lawyer-cohen-says-he-unwittingly-sent-ai/docview/2907550107/se-2

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A.I. Hallucinations

Incorrect results that are based on available information

- Data needs a quality standard because once you input something for artificial intelligence and machine learning algorithms, the material is processed and spit out, regardless of whether the data is correct or the results is accurate.

- AI doesn't differentiate between good and bad input data - it works on logic.

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A.I. Hallucinations

ChatGPT Prompt: create a MARC record for The Hate U Give by Angie Thomas Copyright 2017

=650 \0$aAfrican Americans$zFiction.

=650 \0$aPolice shootings$zUnited States$zFiction.

=650 \0$aPrejudices$zFiction.

=650 \0$aFamilies$zFiction.

=650 \0$aSocial activism$zFiction.

=650 \0$aWitnesses$zFiction.

=650 \1$aRacially mixed people$zFiction.

=650 \1$aHigh schools$zFiction.

=650 \1$aSchools$zFiction.

=655 \7$aYoung adult fiction.$2lcgft

=856 42$3Publisher description$uhttp://www.loc.gov/catdir/enhancements/fy1619/2016016884-d.html

=856 42$3Contributor biographical information$uhttp://www.loc.gov/catdir/enhancements/fy1619/2016016884-b.html

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What Up With A.I.

A.I. Hallucinations

Biased Results

Bias in data collection for AI will result in skewed results that will affect that AI's fair application.

Northpointe Inc, developed an A.I. tool, called COMPAS (Correctional Offender Management Profiling for Alternative Sanctions), to assess a criminal defendant's likelihood to more likely to re-offend.

Results: African American defendants are more likely to re-offend and be re-incarcerated than white defendants.
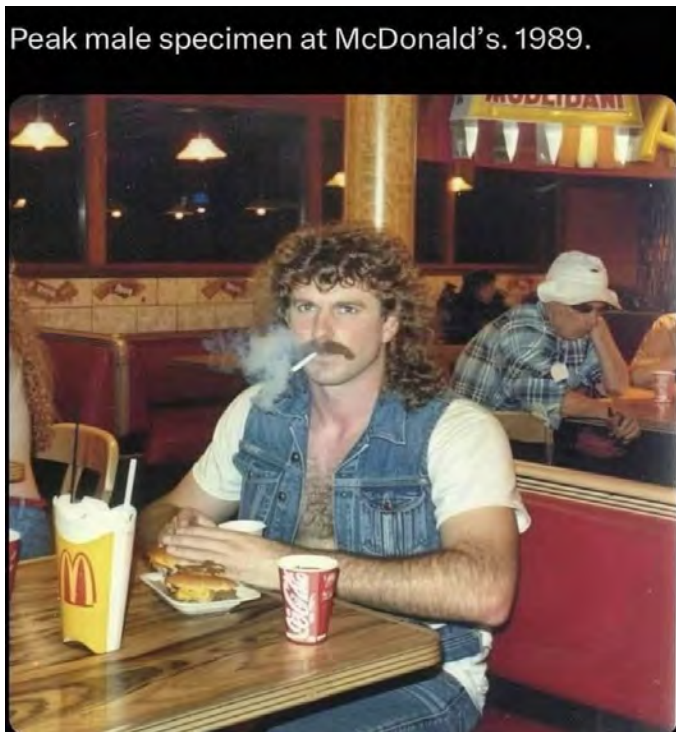
Why was this conclusion reached?

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A.I. Hallucinations

Other Issues: Image distortions.

A.I. is really bad about certain details such as hands backgrounds, and other details.

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Other concerns with A.I.

A.I. will be used to spread disinformation in the upcoming Presidential elections.

Home > Tech

Fake Biden robocall creator suspended from AI voice startup

An audio deepfake of President Biden told voters not to vote in the New Hampshire primary election.

By Anna Iovine on January 27, 2024

AI startup ElevenLabs suspended the creator of a Biden deepfake that told New Hampshire voters not to vote in their state primary. Credit: Stephen Maturen/Getty Images

Donald J. Trump ReTruthed

Patriot4Life
@1776WeThePeople1776 · 2d

Replying to @realDonaldTrump

Q 425   1.59k   ♡ 7.11k

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A.I. and Libraries

Are we getting replaced by A.I.?

Vox's style in The Time Machine (2002) The Time Machine. Dir. Simon Wells. Perf. Guy Pearce, Samantha Mumba, Jeremy Irons, Sienna Guillory, Orlando Jones. Warner Bros.

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What Up With A.I.

A.I. and Libraries

<u>A.I. is not going to spell the doom of libraries any more than the Internet replaced the need of libraries.</u>

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What Up With A.I.

A.I. and Libraries

Where A.I. will impact library service in the future.

Technical Services:

- Based on my experiments with creating MARC records using ChatGPT and Gemini, catalogers are not going to get replaced by A.I. anytime soon.*

*A.I. may get incorporated in an ILS or cataloging modules in the future.

- A.I. may have an impact on Acquisitions and Collection Development.

  - A.I. will be able to identify where you need to add more resources, which resources need to be weeded, and optimize your budget to need the demand of the patrons.

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What Up With A.I.

A.I. and Libraries

Where A.I. will impact library service in the future.

Database Searching-Vendors are exploring using A.I. to allow natural language searching.

- Keyword - Pollution in the Pacific Ocean = Pollution AND Pacific AND Ocean

  - results are often listed by Relevance

- Natural Language searching- will incorporate the keyword searching, but learn from the results to develop patterns and make decisions on relevancy of results

  - Amount of plastic floating in the Pacific Ocean

    - **"Here is other articles about plastics in the Pacific Ocean"**

- A.I. will cut down the time needed to refine searches.

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What Up With A.I.

A.I. and Libraries

Where A.I. will impact library service in the future.

Public Services

After hours chatbot reference services and virtual assistants

- Rather than having a live body man a virtual chat reference services, a chatbot could provide basic reference services.

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A.I. and Libraries

What Can I use A.I. now?

Programming Ideas: ChatGPT, Gemini, CoPilot

- **If you're stuck, try using A.I. for programming ideas**

Policy Writing: ChatGPT, Gemini, CoPilot

- **Provides guidance but doesn't write one for you**

Reader's Advisory: ChatGPT, Gemini, CoPilot

- Can be used in a pinch (but we still subscribe to Novelist)

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A.I. and Libraries

A.I. Tools Discussion

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What Up With A.I.

A.I. and Libraries

A.I. Tools

Futurepedia: https://www.futurepedia.io/ai-tools/code

- Thousands of A.I. tool **sites (it's a rabbit hole)**

  - Free, Freemium, and Paid

Chatbots

  - ChatGPT ChatGPT (openai.com)

  - Google Gemini Gemini (google.com)

  - Microsoft Co-Pilot Copilot (microsoft.com)

  - Perplexity Perplexity

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A.I. and Libraries

A.I. Tools

Research Resources

- Consensous [Consensus: AI Search Engine for Research](https://consensus.app)

- Research Rabbit [ResearchRabbit](https://researchrabbit.ai)

Coding Resources

- Visual Studio Code [Visual Studio Code - Code Editing. Redefined](https://code.visualstudio.com)

- Safurai [Coding GPTs (safurai.com)](https://safurai.com)

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A.I. and Libraries

A.I. Tools

Music Generation

- Soundful [#1 AI Music Studio - AI Music Generator for Creators | Soundful](#)

- Riffusion [Riffusion](#)

Video

- Lumen5 [Lumen5 - Video Maker | Create Videos Online in Minutes](#)

- Gen 2 Runway [Gen-2 by Runway (runwayml.com)](#)

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A.I. and Libraries

A.I. Tools

Image Generation

- NightCafe https://creator.nightcafe.studio/

- Stability AI Stability AI

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Questions?

Contact

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