A Conversation on Specific Areas of Concern with Chat GPT

A Panel Discussion hosted by the Faculty Senate

Panelists/Moderator

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"By far, the greatest danger of Artificial Intelligence is that people conclude too early that they understand it."

~Eliezer Yudkowsky

From Artificial Intelligence as a positive and negative factor in global risk (2008)

What is ChatGPT?

The now common term is an abbreviation of **Chat G**enerative **P**re-trained **T**ransformer. According to *Encyclopedia Britannica*, it is a very specific type of machine learning model designed to create (generate) text in a chatbot-esque fashion. ChatGPT 3 was the big advancement in artificial intelligence from the company, OpenAI, in November of 2022.

Artificial Intelligence (AI)

AI emerged as a field of study in the 1950s. It drew in philosophers, mathematicians, and scientists who all had a desire to see if machines (computers) could be taught to think and learn like humans. Advancements in deep thinking and algorithms abounded but ultimate goal not achieved in 40+ years. Biggest limiter to advancement was in computational power (Anyoha, 2017).

Large Language Model (LLM)

A large language model, or LLM, is a deep learning algorithm that can recognize, summarize, translate, predict and generate text and other content based on knowledge gained from massive datasets. LLMs are fairly new, emerging from the body in 2018. GPT 3 was taught on a LLM with more than a trillion words and 175 billion parameters. (Lee, 2023).

Disruptive Technologies

- The wheel
- Gun powder
- The printing press
- Combustion engine
- The lightbulb
- The automobile
- Personal calculators
- Computers
- The internet
- Cell phones
- Search engines
- ChatGPT 3…

Technology is disruptive when it significantly alters the way people, industries, and businesses operate.

In business it often creates new markets. In military applications, new weapons often had huge impacts on foreign relationships that still have global ramifications. In education, disruptive tech often displaces old schools of thought with the intention of improving understanding and learning outcomes…

But what do we lose when we gain?
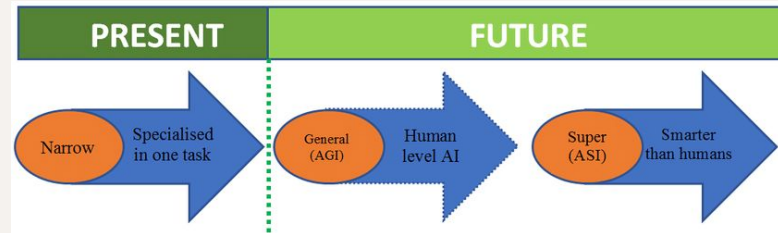
Applications Vs Limitations

- Writing, editing, and translating code.
- Summarizing information.
- Composing music.
- Language learning.
- Brainstorming ideas and topics.
- Creating outlines and numbered lists.
- Taking care of low level tasks that are repetitive and tedious in nature.
- Writing CVs, resumes, and cover letters.
- Prepare for job interviews.
- Assessment.
- Leveling playing field in admissions.
- Accessibility.

- Cannot access the internet...(this version).
- Limited knowledge base...(for now).
- AI does not create in-depth information (character limit under 3k).
- Emotions still give it issues
- Accuracy...it will make up answers if there are gaps in its knowledge.
- Does not multitask well.
- Does not do well with context.
- Citations...it will create mosaic pieces of text from information it has learned but cannot properly cite.
- Replicates bias.

What can we expect from AI and what other types of AI are there?

Web GPT - In development by OpenAI and other competitors. AI will no longer be limited to just its learned environment. This may soon end up usurping the current way information is sought and accessed. Current limitations has it grappling with unfamiliar questions and information. What makes a source credible is giving the AI some growing pains.

ChatGPT 4 - offers advances in reasoning, improved knowledge base (it now does better on tests than previous generations), safer (less bias and it has a higher turn away for inappropriate requests), "alignment" (40% more likely to respond with facts than before) but still exhibits some of the same limitations as ChatGPT 3.

Artificial General Intelligence (AGI) - We are moving toward AGI with current tech advances, the hopes of OpenAI is that their GPT will be at a level of Artificial General Intelligence. ASI is still the ultimate goal of many researchers though there is some push to slow down new research to give time to catch up with understanding, applications, and ethics.

PRESENT	FUTURE	
Narrow — Specialised in one task	General (AGI) — Human level AI	Super (ASI) — Smarter than humans

Harwood, T., Maltby, J., & Mukaetova-Ladinska, E. (2019). Role of Artificial Intelligence (AI) Art in Care of Ageing Society: Focus on Dementia. *OBM Geriatrics*, *3*, 15. https://doi.org/10.21926/obm.geriatr.1903062

Why do we care?

01
Bots can do better?
Machine generated vs. human generated

02
Bots takes learning away?
Self deprofessionalization

03
Bots creates ethical issues and furthers social injustice?
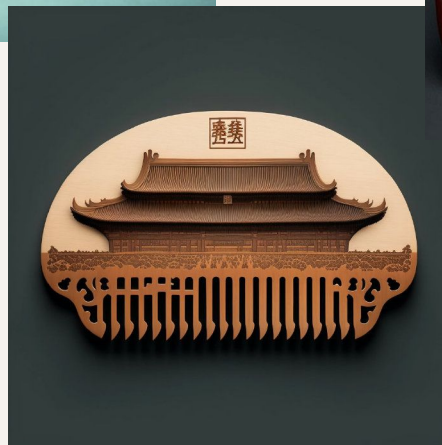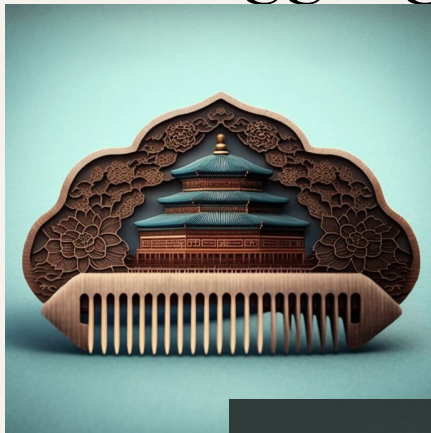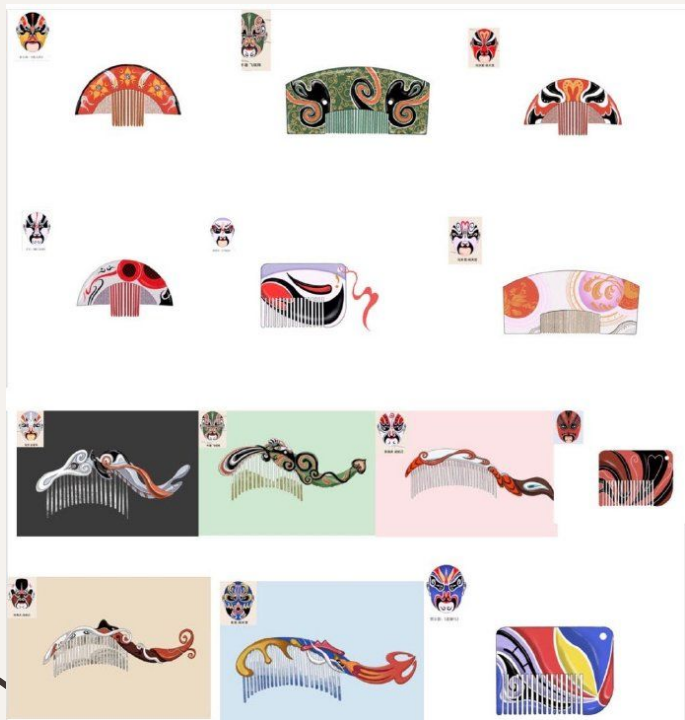Privatization of open source journal articles

04
Existential professor crisis
AI detector of AI - how accurate is it?

AI generated vs Muggle generated

Strategies

Detection

Tools like TurnItIn are working on detection solutions

Transparency

Describe how AI is used in an assignment/project

Integration

Use the tool in ethical and productive ways

What does this mean for us?

A Question and a Statement

Are you here for a degree or an education?

Our goal is to help transform students into ethical, knowledgeable, skillful, and critically-thinking members of society.

Employers, professional programs, graduate schools etc. expect faculty to help transform students into professionals, not just someone that plugs prompts into an AI-platform.

Scholarship requires original thought and writing.

Students may use AI platforms in unethical ways. How do we respond?

Academic Integrity

APPM 3.7 - Page 47 - "(2) Differences in the weight of each voice from one point to the next should be determined by reference to the responsibility of each component for the particular matter at hand"

APPM 4.3 - Page 66 - "Faculty members make every reasonable effort to foster honest academic conduct to assure that their evaluations of students reflects their true merit."

Professional and Moral Obligation

Our charge is to maintain the integrity of academia, the teaching profession, and SE.

In lieu of any formal university policy, faculty have academic freedom to determine how to handle issues related to AI platforms relative to their classroom.

Departments should discuss these platforms and have short- and long-term discussions on this topic.

How does this affect our ability to be effective classroom teachers?

What do you think?

Resources

Handout from presentation

How to cite using ChatGPT: https://apastyle.apa.org/blog/how-to-cite-chatgpt

OpenAI. (2023). ChatGPT (Mar 14 version) [Large language model]. https://chat.openai.com/chat

Richardson, M., & Clesham, R. (2021). Rise of machines? The evolving role of AI technologies in high-stakes assessment. London Review of Education, 19(1), 1-13. https://doi.org/10.14324/LRE.19.1.09

Sun, F. & Ye, R. (2023). Moral considerations of artificial intelligence. Science and Education, 32, 1-17. https://doi.org/10.1007/s11191-021-00282-3