CHATGPT IN MODERN EDUCATION AND RESEARCH

A MULTIFACETED EXPLORATION

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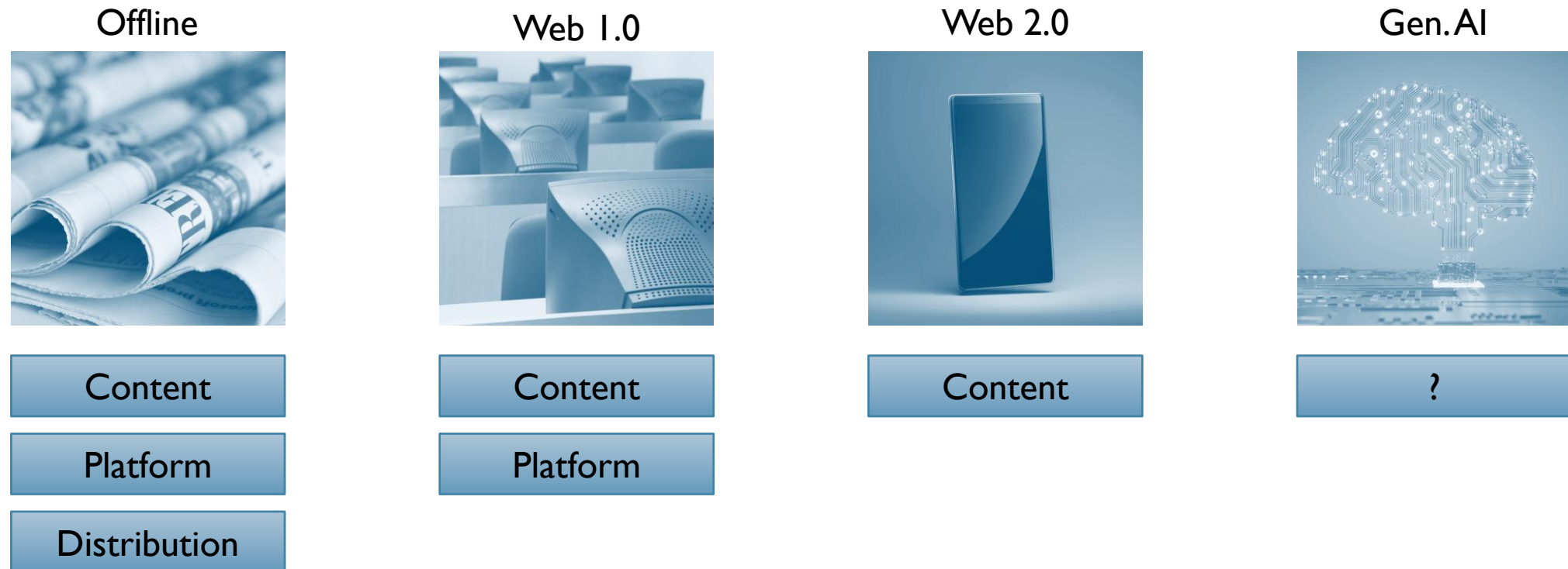# THE GENIE OF THE MODERN ERA

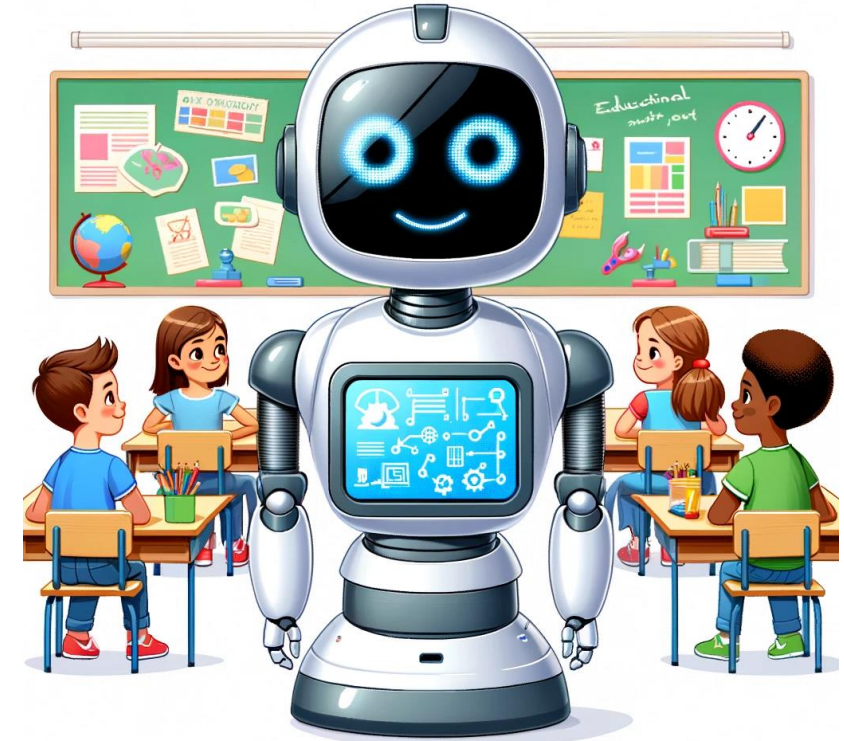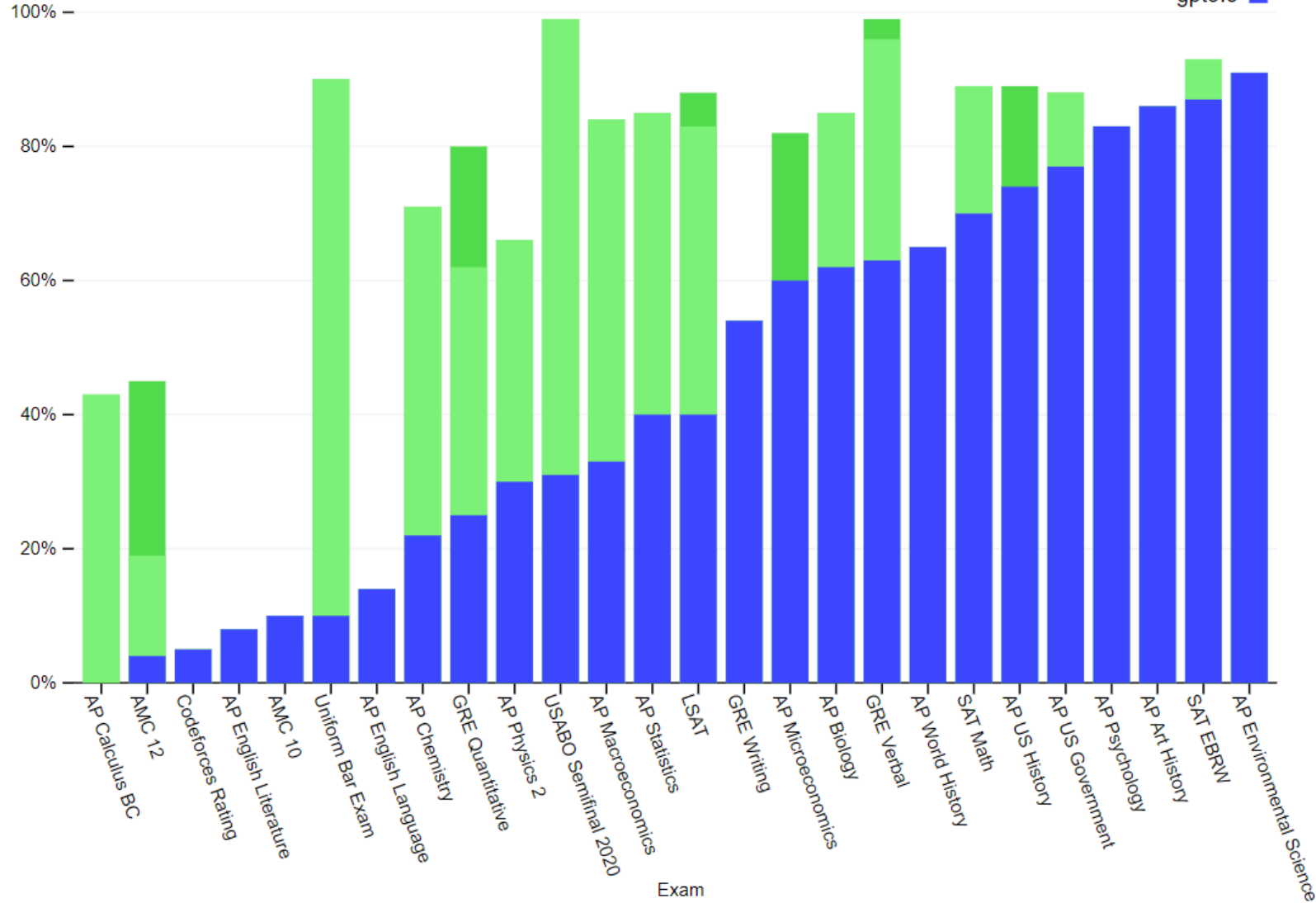| Genie	ChatGPT
Only one user	Unlimited users
3 wishes	"Unlimited" 100/50/25 message cap per 4/3 hours!
Literal interpretation of wishes	"Advanced in understanding natural language" Getting better at not to be fooled/jailbroken!
I am assuming not adaptable!	Capable of learning and adapting over time
Amoral or neutral	Adheres to ethical guidelines
Mythical!	**Real!**

Source: ChatGPT 4

A MULTI-USER GENIE – PROBLEM!

Example: The Disrupted Business Model of News Publishing

Offline	Web 1.0	Web 2.0	Gen. AI

Content	Content	Content	?
Platform	Platform		
Distribution			

Source: S. Damborg, "Mastering Digital Transformation"

Exam results (ordered by GPT-3.5 performance)

Estimated percentile lower bound (among test takers)

Legend: gpt-4 (dark green), gpt-4 (no vision) (light green), gpt3.5 (blue)

Source: Open AI GPT-4 Launch Blog

How Does ChatGPT Perform in Different Subject Domains?

- Critical and higher-order thinking: **Outstanding**
- Economics: **Outstanding**
- Programming: **Outstanding to satisfactory**
- English language comprehension: **Satisfactory**
- Law: **Barely satisfactory to unsatisfactory**
- Medical education: **Barely satisfactory to unsatisfactory**
- Mathematics, Software testing, MCQ-based exams: **Unsatisfactory**

Source: Lo, Chung Kwan. "What is the impact of ChatGPT on education? A rapid review of the literature." *Education Sciences* 13.4 (2023): 410.

How Can ChatGPT Be Used to Enhance Teaching and Learning?

Teachers

Students

Teaching preparation	Assessment	Learning	Assessment
• Generating course materials • Providing suggestions • Performing language translation	• Generating assessment tasks • Evaluating student performance	• Answering questions • Summarising information • Facilitating collaboration	• Concept checking and exam preparation • Drafting assistance • Providing feedback

Source: Lo, Chung Kwan. "What is the impact of ChatGPT on education? A rapid review of the literature." *Education Sciences* 13.4 (2023): 410.

MAJOR POTENTIAL ISSUES ASSOCIATED WITH CHATGPT

Accuracy and reliability

- Relying on biased data
- Having limited up-to-date knowledge (not all Gen.AI models)
- Generating incorrect/fake information

Plagiarism prevention

- Student plagiarism
- Bypassing plagiarism detectors

Source: Lo, Chung Kwan. "What is the impact of ChatGPT on education? A rapid review of the literature." *Education Sciences* 13.4 (2023): 410.

UNIVERSITY/COURSE POLICY FOR CHATGPT

- Provide clear instructions and guidelines for its use

  - Explicitly state in the course syllabus or assessment (e.g., project or assignment) that ChatGPT can be utilized

- Example policy:

  - ChatGPT is an AI-based tool that helps you generate texts in a very short amount of time, making it easier and more efficient to search for and find summarized information and ideas related to the subject of interest, and to improve your writing.

  - You need to examine and evaluate the information generated by ChatGPT, as it may produce irrelevant or inaccurate information.

  - You should explicitly acknowledge the assistance of ChatGPT in the creation of your work.

  - When submitting your final report, you should provide two files: an audit trail of queries and a reflection report/note.

- It is expected that there may be some degree of similarity between student reports.

- The instructor will carefully inspect any texts that are suspected of plagiarism or have been generated largely by AI.

- Focus on Critical Analysis ("how/reflection/comparison/decision-making"), not just "what".

Source: Halaweh, Mohanad. "ChatGPT in education: Strategies for responsible implementation." (2023).
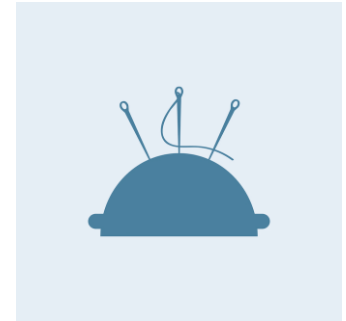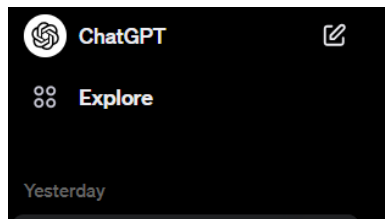
Brainstorming ideas

Refining/proofreading

Understanding CFPs

Tailoring text for impact, etc.

CHATGPT IN RESEARCH

SECURITY ISSUES – COMPUTER VISION ATTACKS!
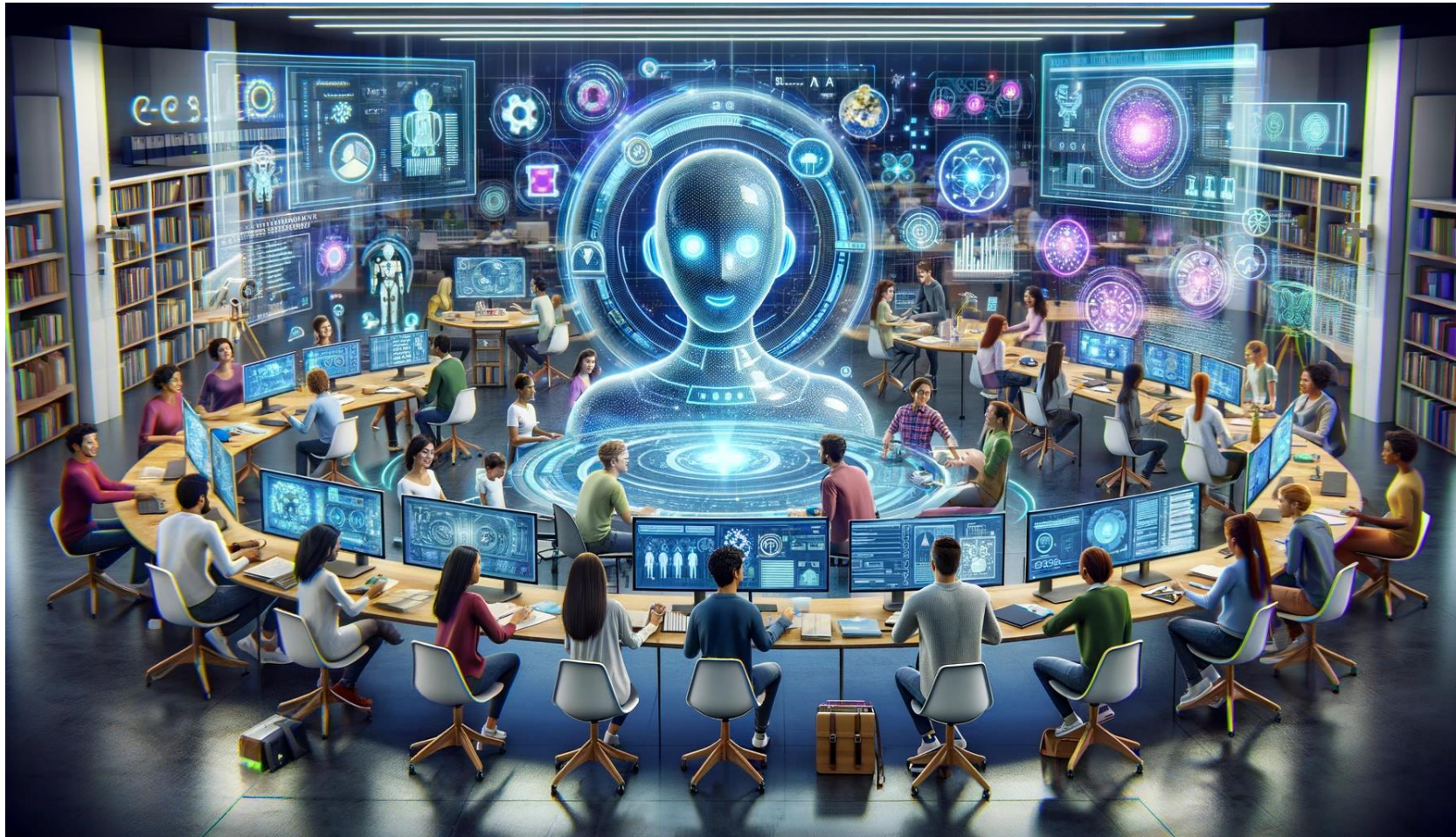
NOTE:

- "ChatGPT is incredibly limited but good enough at some things to create a misleading impression of greatness. It's a mistake to be relying on it for anything important but a preview of progress. We have lots of work to do on robustness and truthfulness."

- — Sam Altman, CEO of OpenAI

What we observe is the integration of AI in every aspect of our lives: <u>AINTEGRATION!</u>

THANK YOU

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