



Can ChatGPT's Research Match Human Expertise?

Description

OpenAI's ['deep research'](#) is an innovative artificial intelligence (AI) instrument [garnering considerable attention](#) for its ability to accomplish tasks in mere minutes that would typically require extensive hours of human expert analysis.

Integrated within ChatGPT Pro and [advertised](#) as a research assistant on par with skilled analysts, this tool autonomously navigates the web, aggregates information, and produces structured reports. It even [achieved](#) a remarkable score of 26.6 percent on Humanity's Last Exam (HLE), a demanding benchmark for AI, [surpassing](#) many competing models.

However, the reality of deep research may not fully align with its marketing hype. While the system generates high-quality reports, it is not without significant shortcomings. [Journalists](#) who have engaged with the tool note its propensity to overlook critical details, exhibit difficulty with recent developments, and even fabricate information.

 shelves of library books

Although OpenAI's deep research assistant excels at processing data, it lacks the nuanced understanding characteristic of human cognition. ([Iñaki del Olmo/Unsplash](#))

OpenAI acknowledges these limitations, indicating that the tool "can occasionally hallucinate facts or draw erroneous conclusions, albeit at a reduced rate compared to previous ChatGPT iterations, based on internal assessments."

Unsurprisingly, inaccuracies can occasionally infiltrate its outputs, as AI systems do not "know" information in the same intricate manner as humans.

What is 'deep research' and who can benefit from it?

Targeted at professionals in finance, scientific fields, policy-making, legal sectors, and engineering, as well as academics and journalists, deep research is presented as the latest "[agentic experience](#)" offered through ChatGPT. It asserts the capability to streamline the burdensome aspects of research into mere minutes.

Currently, this functionality is exclusively available to ChatGPT Pro users within the United States at a monthly fee of \$200. OpenAI [plans](#) to extend access to Plus, Team, and Enterprise tiers in the following months, with more economical options anticipated.

Distinct from standard chatbots that yield quick replies, deep research employs a systematic approach to generate comprehensive reports:

1. The user projects a query, which might range from market assessments to legal summaries.
2. The AI seeks clarification, posing additional questions to fine-tune the research parameters.
3. The agent independently scours the web, navigating numerous sources such as news articles, academic papers, and online databases.



4. It consolidates its findings, extracting salient points, organizing them into a structured report, and appropriately citing its references.
5. Within a span of five to thirty minutes, the user receives a detailed document summarizing the research outcomes, potentially equivalent to a PhD-level thesis.

At face value, this tool appears to be a boon for knowledge workers; however, a closer examination uncovers notable deficiencies.

Numerous [initial evaluations have revealed](#) its limitations:

- Lack of contextual awareness, as the AI can summarize but fails to grasp critical nuances.
- Neglecting recent developments, leading to the omission of significant legal or scientific advancements.
- Generating fabricated information, akin to other AI models.
- Inability to discern fact from fiction, failing to differentiate between authoritative and unreliable sources.

Despite OpenAI's assertions that this tool rivals human analysis, it invariably lacks the discernment, rigorous evaluation, and specialized knowledge that elevate quality research.

What AI cannot supplant

ChatGPT is not the only AI capable of rapidly traversing the web and producing reports from minimal input. Notably, just [24 hours post-launch](#), Hugging Face released a free, open-source alternative that nearly parallels its effectiveness.

The principal risk associated with deep research and similar AI tools is the misconception that machines can adequately replace human cognition. While AI can effectively summarize information, it lacks the capacity to question its own premises, identify knowledge gaps, think innovatively, or appreciate diverse viewpoints.



human reading books

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Currently, AI does not surpass human capability in comprehending intricate research questions. ([Elijah Hail/Unsplash](#))

Moreover, AI-generated summaries lack the [depth](#) and insight of a [competent](#) human researcher.

Any AI agent, no matter how expedient, remains a tool rather than a substitute for human intellect. It is paramount for knowledge workers to enhance skills that AI cannot emulate, such as critical thinking, evidence verification, in-depth specialization, and creativity.

For those inclined to utilize AI in research, responsible usage is crucial. Thoughtful integration of AI can elevate research efforts without compromising precision or depth. For instance, AI may be employed for efficiency—such as synthesizing documents—while human judgment remains the cornerstone of decision-making.

It is essential to validate sources, as AI-generated citations can be deceptive. Exercise critical thinking and verify information against reputable sources, particularly on high-stakes issues such as [health](#), [justice](#), and [democracy](#); in such cases, complement AI findings with insights from human experts.

Despite extensive marketing that suggests otherwise, the limitations of generative AI persist. Individuals capable of creatively synthesizing information, questioning assumptions, and exercising critical thinking will continue to be indispensable—AI has yet to substitute their irreplaceable abilities.



Raffaele F Ciriello, Senior Lecturer in Business Information Systems, [University of Sydney](#)

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Vocabulary List:

1. **Innovative** /'ɪnəˌveɪtɪv/ (adjective): Introducing or using new ideas or methods.
2. **Autonomously** /ə'tɒnəməsli/ (adverb): Operating independently without human control.
3. **Discerning** /dɪ'sɜːnɪŋ/ (adjective): Having or showing good judgment.
4. **Scrutinize** /'skruː.tɪ.naɪz/ (verb): To examine something very carefully.
5. **Synthesizing** /'sɪnθəˌsaɪzɪŋ/ (verb): Combining various components into a coherent whole.
6. **Cognition** /kɒg'nɪʃən/ (noun): The mental action or process of acquiring knowledge and understanding.

Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)

1. What is the primary goal of mitigation in disaster management?
Option: A. Increase the damage
Option: B. Reduce the impact
Option: C. Delay the response
Option: D. Intensify the situation
2. Which type of white blood cells are the most abundant in the human body?
Option: A. Monocytes
Option: B. Lymphocytes
Option: C. Basophils
Option: D. Neutrophils
3. What is a common symptom of Parkinson's disease?
Option: A. Fever
Option: B. Tremor
Option: C. Rash
Option: D. Headache
4. Which term best describes a natural disaster with severe consequences?
Option: A. Mild
Option: B. Catastrophic



- Option: C. Average
Option: D. Insignificant

5. Which term is used to describe something that introduces new ideas or methods?

- Option: A. Traditional
Option: B. Innovative
Option: C. Conventional
Option: D. Outdated

6. What does it mean to scrutinize something?

- Option: A. Ignore
Option: B. Examine closely
Option: C. Jump to conclusions
Option: D. Disregard

7. Which term refers to the mental action or process of acquiring knowledge and understanding?

- Option: A. Perception
Option: B. Cognition
Option: C. Emotion
Option: D. Intuition

8. What is the molten rock material beneath the Earth's surface called?

- Option: A. Lava
Option: B. Granite
Option: C. Magma
Option: D. Sediment

9. If a soil is said to be enriched what does it contain in higher amounts?

- Option: A. Nutrients
Option: B. Toxins
Option: C. Water
Option: D. Sand

10. What term is used to describe estimates or forecasts of future events?

- Option: A. Reflections
Option: B. Projections
Option: C. Memories
Option: D. Revisions

Gap-Fill (Fill in the blanks with the correct word from the vocabulary list.)

11. _____ is the body's response to injury or infection often characterized by redness



swelling heat and pain.

12. _____ of cells can result in altered behavior or function.

13. _____ waves are vibrations caused by earthquakes.

14. The sound of gentle waves and the sight of a peaceful landscape can evoke a sense of _____.

15. Being able to _____ potential risks can help in developing effective risk management strategies.

16. Each artist has unique _____ that can be identified in their works.

17. The _____ of a situation can change rapidly requiring adaptability.

18. Stock prices are subject to _____ in response to market conditions.

19. His _____ love for music has been evident since childhood.

20. Maintaining _____ during exams is crucial for good performance.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)

21. During a hurricane residents may need to leave their homes and move to safer locations.
22. Feeling nervous or fearful about an upcoming test is common among students.
23. The robot functions without direct human control.
24. The ability to accept differences in opinions and beliefs is a sign of maturity.
25. Combining information from various sources is essential for effective decision-making.
26. After the company's losses a change in strategy led to a remarkable turnaround in profits.
27. A individual can accurately judge the quality of products or services.
28. The study of galaxies stars and other celestial bodies falls within the realm of science.



29. The process of water turning into ice is an example of

30. These white blood cells are the first responders to sites of infection or injury.

Answer

Multiple Choice: 1. B. Reduce the impact 2. D. Neutrophils 3. B. Tremor 4. B. Catastrophic 5. B. Innovative
6. B. Examine closely 7. B. Cognition 8. C. Magma 9. A. Nutrients 10. B. Projections

Gap-Fill: 11. Inflammation 12. Reprogramming 13. Seismic 14. Tranquility 15. Anticipate 16. Signatures
17. Dynamics 18. Fluctuations 19. Enduring 20. Concentration

Matching sentence: 1. Evacuate 2. Apprehensive 3. Autonomously 4. Tolerance 5. Synthesizing 6. Reversal
7. Discerning 8. Cosmic 9. Crystallization 10. Neutrophils

CATEGORY

1. Sci/Tech - LEVEL5

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Author

aimeeyoung99

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