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MAJOR RISKS FOR THE FUTURE OF ARTIFICIAL INTELLIGENCE

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1. The Economic Unviability of Current AI Business Models

Statement: The current financial model of leading AI companies is potentially unsustainable due to the widening gap between massive operational costs and actual revenue.

Argument: As highlighted in market analyses, specifically by HSBC Global Research, companies like OpenAI may face a projected funding gap exceeding $207 billion by 2030 [1]. The costs of specialized hardware and the huge amounts of energy required to train larger models are rising significantly faster than the revenue generated from user subscriptions. According to analysts from Goldman Sachs, these massive capital expenditures strongly resemble historical tech bubbles [2]. **Conclusion:** Without a significant shift in monetization strategies or cost reduction, the industry faces the severe risk of an economic bubble burst.

2. The Severe Environmental Impact of AI Infrastructure

Statement: The rapid expansion of AI technologies creates a staggering environmental footprint that threatens global sustainability.

Argument: Research detailed by MIT News shows that the computational power required to train generative AI models demands an enormous amount of electricity, which directly leads to increased carbon dioxide emissions [3]. Furthermore, the massive data centers used to run these deep learning models consume millions of gallons of water for their cooling systems. This high consumption can strain local water supplies and negatively affect regional ecosystems.

Conclusion: The current path of scaling AI is environmentally problematic, and the industry must prioritize energy-efficient architectures to reduce its ecological damage.

3. The Problem of "Model Collapse"

Statement: Using too much content created by AI is dangerous for the future learning and accuracy of neural networks.

Argument: A study published in Nature (Shumailov et al., 2024) shows a big problem called "model collapse" [4]. This is a degenerative process that happens when AI learns from synthetic data made by other AIs instead of authentic human data. Because synthetic data lacks the richness of real-world information, the research proves that the AI starts to forget important details and specific facts. As a result, the AI becomes confused and its answers become much less accurate.

Conclusion: To keep AI smart and functional, companies must continue to teach it with high-quality texts and images created by real people, not machines.

4. The Saturation of Digital Space with Low-Utility "Slop"

Statement: The industry's focus is shifting from solving complex problems to flooding the consumer market with low-value synthetic entertainment.

Argument: Reports regarding OpenAI’s roadmap, such as those detailed by NotebookCheck (2024), indicate plans to launch an AI-only video platform similar to TikTok [5]. Critics argue this results in the proliferation of "AI slop" – poor quality, unwanted content created solely to capture user attention without offering genuine informational value. This trend prioritizes speed and quantity over substance. **Conclusion:** This risks alienating users who seek authentic human connection, overwhelming our information landscape, and questioning the practical necessity of such technologies.

5. Persistent Reliability Issues in Large Language Models

Statement: Despite increased computational power and much larger dataset sizes, modern AI

models remain fundamentally unreliable for critical decision-making.

Argument: As admitted in the GPT-4 Technical Report (OpenAI, 2023), scaling up models does not eliminate "hallucinations" or logical errors [6]. The system often produces highly convincing but factually incorrect statements. Because the technology is essentially designed to guess the next word rather than check facts, confirming that increasing model size does not automatically guarantee truthfulness or safety.

Conclusion: The current architecture has inherent limitations that cannot be solved simply by adding more computing power.

References

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