

Generative AI: Completing the Picture with Critical Thinking

By Tom Mullaney

Definitions

"Artificial Intelligence"

- Origin of "Artificial Intelligence" Stanford Researcher Dr. John McCarthy, 1973.
 - [The Lighthill debate on Artificial Intelligence: "The general purpose robot is a mirage"](#) (timestamped to 46:00)
- Dr. Emily M. Bender testimony to the US House of Representatives, "AI is a marketing term."
 - [How should regulators think about "AI"?](#)

ELIZA and The ELIZA Effect

- [Pedagogy And The AI Guest Speaker Or What Teachers Should Know About The Eliza Effect](#)

Stochastic 🦜

- [On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?](#) 🦜 (research paper)
 - [You Are Not a Parrot by Elizabeth Weil, New York Magazine, March 1, 2023.](#)
 - Google's reaction: Fire [Gebu](#) and [Mitchell](#).
 - Sam Altman's [reaction](#): "i am a stochastic parrot, and so r u"

Slop

- [AI Slop from Wikipedia](#)
 - [White House Partners With PragerU to Make AI-Slopified Founding Fathers.](#) (404 Media)

- [The AI Slop Presidency](#) (404 Media)
- [Born Fighter](#) AI-generated video by Johsh Gottheimer
 - 5.1 million views, 46 likes.
- [Why Is YouTube Recommending These AI Channels?](#) by Jarvis Johnson

Hallucinations

- [Emily Bender on LLM'Emily Bender on LLMs' usefulness](#)
- [Emily Bender on LLMs and accuracy](#)
- [How Chatbots and AI Are Already Transforming Kids' Classrooms](#) - Bloomberg Businessweek
- [Please Don't Use Generative AI To Mimic Historical Figures](#) - Tom Mullaney
 - [Dolly Parton on AI's Potential Impact on the Music Industry: "That's Like the Mark of the Beast"](#) - American Songwriter
- [How thousands of 'overworked, underpaid' humans train Google's AI to seem smart](#) - The Guardian
- [Before You Become a Gemini Certified Educator](#) - Tom Mullaney
- [Google Employees Internally Share Memes About How Its AI Sucks](#) - 404 Media
- ["Sloppenheimer:" Amazon Employees Mock the Company's AI on Slack](#) - 404 Media
- [Women are 20% less likely to use AI — here's the completely unsurprising reason why](#) - Tom's Guide
 - [Global Evidence on Gender Gaps and Generative AI](#) - Research paper
 - [Mel Robbins Paid to Push AI & Tahoe Loses Power in 2027 Because of Data Centers | The Moment LIVE](#)

Generative AI and Learning

- [Generative AI Without Guardrails Can Harm Learning: Evidence from High School Mathematics](#) (Wharton School Research Paper)
- [AI Use Appears to Have a "Boiling Frog" Effect on Human Cognition, New Study Warns](#)
- [Alarming Study Finds That Most People Just Do What ChatGPT Tells Them, Even If It's Totally Wrong](#)

- [Thinking—Fast, Slow, and Artificial: How AI is Reshaping Human Reasoning and the Rise of Cognitive Surrender](#) (Wharton School Research Paper)
- [Counting on AI to Solve Problems Makes Us More Likely to Struggle and Give Up, Study Suggests](#)
 - [AI Assistance Reduces Persistence and Hurts Independent Performance](#)
- [Is AI dulling our minds?](#) (The Harvard Gazette)
 - [Your Brain on ChatGPT: Accumulation of Cognitive Debt when Using an AI Assistant for Essay Writing Task](#) (MIT Study, Opens PDF)
- [A.I. Will Destroy Critical Thinking in K-12](#) - I thought this was an NYT gift link, but maybe not?
- [Harvard, Jump off the AI Bandwagon](#) - The Harvard Crimson
- [UC Berkeley Cracks Down On AI Use With New Policy](#) - Above The Law
- [ChatGPT May Be Eroding Critical Thinking Skills, According to a New MIT Study](#)
- [Meta brought AI to rural Colombia. Now students are failing exams](#)
- [Microsoft Study Finds AI Makes Human Cognition “Atrophied and Unprepared”](#)
- [This is your brain. This is your brain on ChatGPT.](#)
- [Your Brain on ChatGPT: Accumulation of Cognitive Debt when Using an AI Assistant for Essay Writing Task](#)
- [RIP Khanmigo & Edtech Industry Dreams of AI Tutors](#) by Dan Meyer.
- ['Nature' Publisher Retracts Paper on the Benefits of ChatGPT in Education](#) (404 Media)

Generative AI and the Environment

- ['How come I can't breathe?': Musk's data company draws a backlash in Memphis](#) - Politico.
- [Elon Musk's New AI Data Center Raises Alarms Over Pollution](#) - Time.
- [‘Thirsty’ AI: Training ChatGPT Required Enough Water to Fill a Nuclear Reactor’s Cooling Tower, Study Finds](#) - Gizmodo.
- [AI's hidden climate costs | About That](#) - CBC News video.

- [How much electricity does AI consume?](#) - The Verge.
- [A data center drained 30M gallons of water unnoticed — until residents complained about low water pressure](#) - Politico
- [A major watchdog says data centers are wreaking havoc on North America's power grid](#) - Business Insider
- [Rising Emissions, Depleting Water and Vanishing Land—UN Scientists: AI Is Threatening Natural Resources for Billions](#) - The UN
- [Data centers raise nearby temperatures by up to 4 degrees in Phoenix](#) - Arizona State University
 - [Data Center Waste Heat as an Emerging Urban Thermal Hazard: First Field Measurements of Neighborhood-Scale Air Temperature Impacts](#) - Journal of Engineering for Sustainable Buildings and Cities

Resources

Badges

- [Human Intelligence Badge](#) by Beth Spencer.
- [Not By AI](#)
- [Create Don't Scrape Checklist](#)

Art and Photography

- [Better Images of AI](#) - Search the [library](#) by issues.
- [Nappy](#) - Beautiful photos of Black and Brown people, for free.
- [Pexels](#)
- [Unsplash](#)
- Not Creative Commons, but [Beata Kaczmarek](#)'s portfolio makes me ask, "Why on Earth do we need to generate images?"
 - [Kaczmarek's Instagram](#)

Environmental Resources

- [AI + Planetary Justice Alliance](#)
- [Environmental Transparency Explorer Tool](#) 🧐🌍 - Explore the data from 'Misinformation by Omission: The Need for More Environmental Transparency in "AI"'
- [Hugging Face's The Environmental Impacts of AI -- Primer](#) - All your questions answered as best as possible.
- [How Teachers and Schools Can Be Earth-Reverent In The Age Of Generative AI](#) - Resources for teaching students.
- [What Happens When Data Centers Come to Town?](#) - PDF from the University of Michigan Ford School of Public Policy.
- [What Uses More?](#) - Compare the energy used by your digital activities.
- [Save The AI - AI Needs Your Help](#) - And we need some laughs.
 - Check out [Save The AI posters](#) - available in 9 languages.

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Micro-credential

- [AI@School: Effective and Responsible AI Integration](#)
 - Tom has not tried and does not endorse.

🎓 Graduation

- [Multiple commencement speakers booed for AI comments during graduation speeches](#) (YouTube)
 - [Booing Commencement Speakers Over AI is Becoming a Trend](#) - New York Magazine
- [Harvard Grads Cheer Comedian Ronny Chieng's AI Speech](#) (YouTube)
 - [Ronny Chieng Address | Harvard Class Day 2026](#) (YouTube)

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