



Artificial Intelligence in Practice and Navigating the New Administration's AI Priorities

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Roadmap



1. Recent Advancements in AI
2. AI Adoption in Business
3. Early Risk-Based AI Regulation
4. Federal Activity During the Biden Administration
5. Trump Administration's AI Priorities

What is “artificial intelligence”?

To grossly simplify, it is the use of **computer science** and **extensive data sets** to **enable problem solving or decision-making**.

Artificial intelligence is **often conflated** with machine learning, natural language processing, and other areas of computer science.

Recently, we can add large language models (LLMs) and generative AI to this list.

What is “artificial intelligence”?

For issue-spotting purposes, it is simplest to start with the broader umbrella of *algorithms*.

In truth, **most regulators are using “Artificial Intelligence” as shorthand for “Automated Decision-making.”**



**JOINT STATEMENT ON ENFORCEMENT EFFORTS AGAINST
DISCRIMINATION AND BIAS IN AUTOMATED SYSTEMS**

What are these “algorithms” and how are they useful?

An algorithm is a set of steps to accomplish a task. This can range from a simple recipe to modeling the fuel requirements of a moonshot.

In the case of **artificial intelligence**, steps are **automated** and the **data can be unstructured**.

- Machines excel at **pattern recognition**
- Machines can **scale without tiring**
- *In theory**, machines can be **audited** and can **reduce bias**

When applied appropriately, sophisticated algorithms can greatly increase the efficiency, accuracy, and consistency of decisions.



A Tale of Two Robots. And risks.

The two types of AI systems that you will most likely encounter in practice use **extractive AI** or **generative AI**.

Extractive AI identifies and extracts relevant information from a large set of existing data upon which it was trained.

For better and for worse, **generative AI** is attempting create something completely new from existing data. Generative AI can “**hallucinate**” plausibly wrong answers – this is a feature and a bug.

Example of an Extractive AI System: A neural network sorting inputs

DATA

Which dataset do you want to use?



Ratio of training to test data: 50%



Noise: 50



Batch size: 13



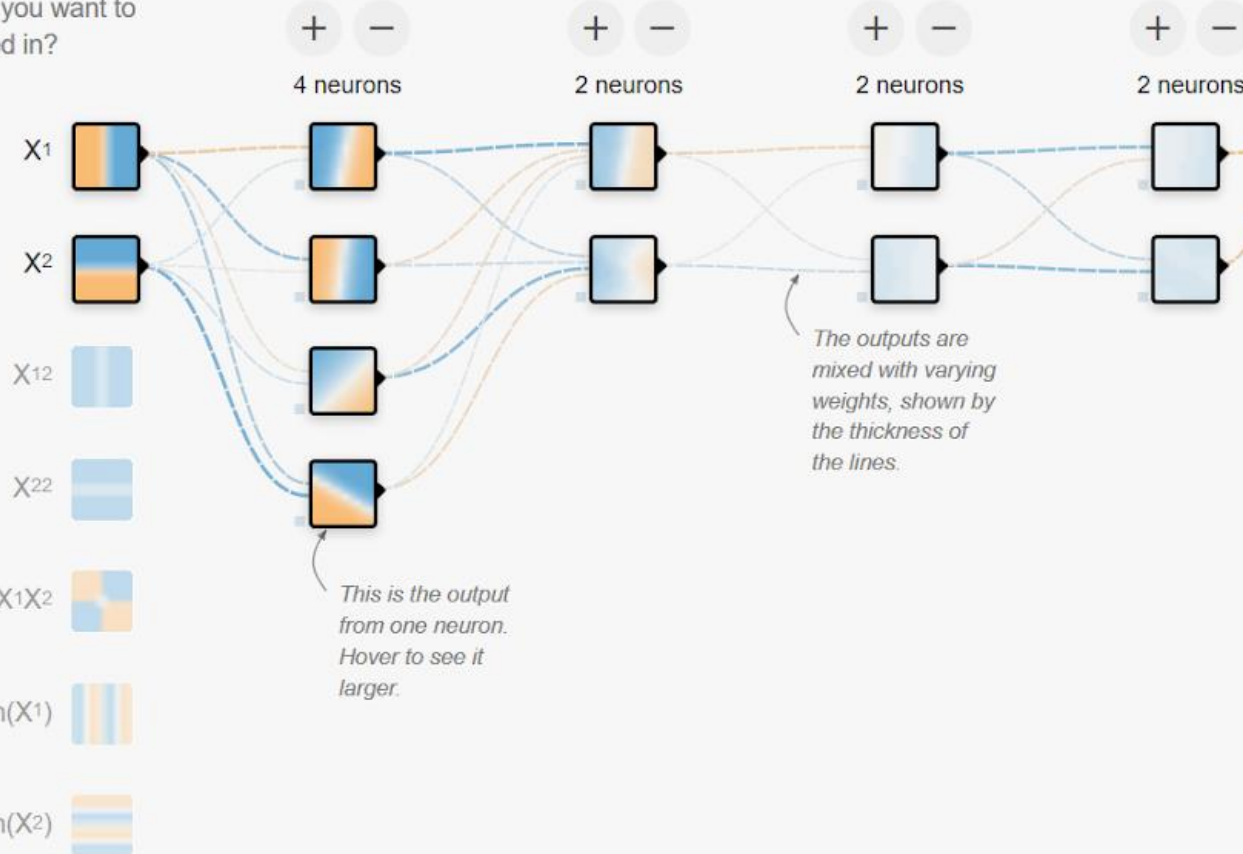
REGENERATE

FEATURES

Which properties do you want to feed in?

- ☒ X_1
- ☒ X_2
- ☐ X_{12}
- ☐ X_{22}
- ☒ X_1X_2
- ☐ $\sin(X_1)$
- ☐ $\sin(X_2)$

4 HIDDEN LAYERS



OUTPUT

Test loss 0.510
Training loss 0.511



Colors shows data, neuron and weight values.



Source: “[A Neural Network Playground](#)” by Tensorflow

So, what about generative AI?

The Rise of Generative AI

For years, traditional AI has operated in the background, helping us find existing data and make predictions.

However, generative AI captured the world's attention by using natural language prompts to create *new* content.



Image Source: OpenAI, [DALL-E 3](#)

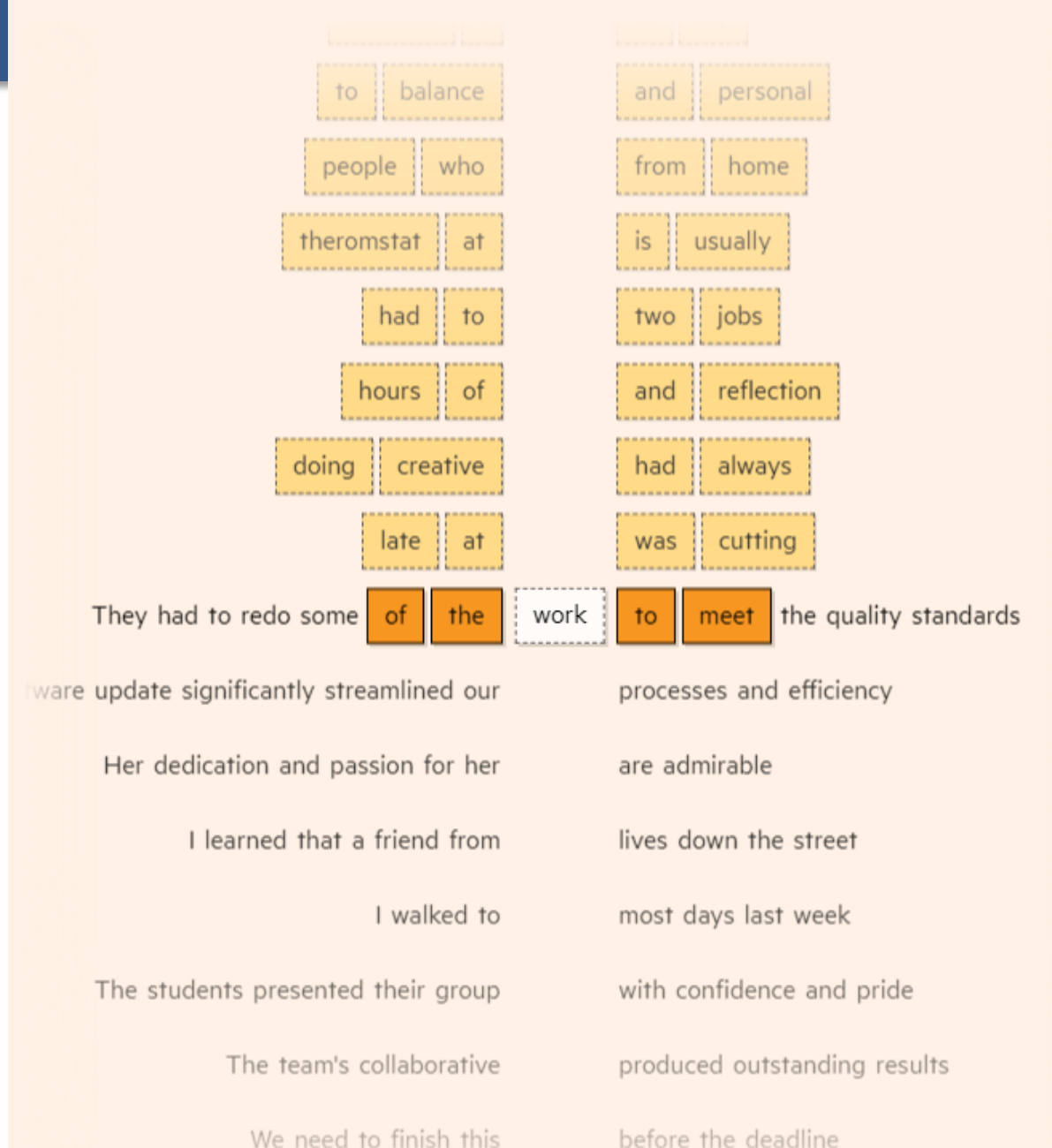


Image Source: Financial Times, [Visual Storytelling Team](#)

What is *different* about **Generative AI**?

In broad terms, traditional AI is designed and optimized to perform **specific tasks** based on a **specific set of inputs**. The systems can **learn from additional data** and make **predictions based on data**, which is how Netflix can recommend which show you will binge next.

Traditional AI **may identify new “insights”** that did not occur to humans within existing data and rules, but it is **not inventing a new process**.



Image Source: The Atlantic, [How Google's AlphaGo Beat a Go World Champion](#)

What is *different* about **Generative AI**?

Generative AI attempts to create something new based on the information – or “prompts” – that you provide. It goes further than traditional AI by **creating new data similar to its training data.**

The **dog** chewed the bone because it was delicious.

In a quiet little village nestled among picturesque landscapes, there lived a faithful canine with a red collar that adorned his neck like a crown. This charming creature was a beloved member of the Johnson family, with a gleaming coat of golden fur and eyes that sparkled with warmth and affection. He won the hearts of everyone who crossed his path. The red collar became a symbol of his loyalty and an emblem of the countless adventures that awaited him. From the day he trotted into the Johnsons' lives, he brought an abundance of joy and laughter. His days were filled with frolic in the nearby park, chasing butterflies, and playing fetch with the children. In the afternoons, he would faithfully accompany Mr. Johnson on his walks around the neighborhood, sniffing the scents of the world with curious enthusiasm. The townsfolk admired his friendly nature and the undeniable bond he shared with his family. Whenever he wore the red collar, it shone like a beacon, a reminder of the unconditional love offered to those who embraced him. Every evening, as the dusk settled over the village, Mr. Johnson ensured that the dog had a hearty meal. With love and care, with a wholesome blend of nutritious ingredients, they would sit patiently, his tail wagging eagerly, until the clock struck six. As the aroma of his favorite meal wafted through the air, he couldn't contain his excitement. His red collar jingled with each step he took towards his feeding bowl, a sound that had become synonymous with the joyous anticipation of dinner time. Beyond the boundaries of the town, the dog's escapades expanded into a realm of wild exploration. He roamed through vast meadows and ventured into dense forests, his red collar contrasting against the vibrant hues of nature. On one such adventure, he met a pack of fellow canines, and together, they formed an inseparable bond. They navigated through the wilderness, encountering thrilling encounters with other animals, all while sharing tales of loyalty and bravery under the watchful stars. As time passed, the dog grew older, and the years began to leave their mark on his once vibrant fur. Though his steps may have slowed, his spirit remained undimmed. The red collar, now slightly faded, continued to adorn his neck, a symbol of the unforgettable memories he had woven into the fabric of his family's life. As he approached the twilight of his days, the Johnsons made sure to reciprocate the love and care he had bestowed upon them throughout the years. They cherished every moment, knowing that the time they spent together was a precious gift, and they were determined to make it memorable.

In a quiet little village nestled among picturesque landscapes, there lived a delightful canine named Luna, whose presence brought an unending sense of joy to all. Luna was a beautiful mix of Labrador and Border Collie, with a silky black coat that shimmered under the sun and a pair of striking amber eyes that sparkled with intelligence. The townspeople couldn't help but smile whenever they caught a glimpse of Luna's wagging tail and the exuberance in her every step. Her playful energy was infectious, drawing people from all walks of life to her side, eager to bask in the warmth of her companionship. Luna was adored with the same fervor as the sun. Every morning, Luna would race through the village square, her tail held high, leading the way for the children and their parents. The local children adored her, and she became their loyal companion in every adventure they embarked upon. She would join them in the meadows, chasing butterflies, and rolling in the soft grass. Her presence at the village square became a delightful spectacle, as she delighted in meeting new faces and playfully nuzzled anyone willing to indulge her in games of fetch or tug-of-war. Luna's boundless energy was a testament to the sheer happiness that she brought to the lives of those around her. One of Luna's favorite pastimes was when she would sit on the grass, watching the children play. Every afternoon, she would eagerly wait for the ball to be thrown. When the children's laughter filled the air, she would dash forward, her red collar jingling, ready to retrieve it. Her little friends would soon come running towards her, with a bright red ball gripped firmly in their hands, they would take turns throwing it far into the distance, and Luna would dash like the wind to retrieve it, her tail wagging back and forth in sheer delight. The children's laughter filled the air as they cheered her on, and the bond between Luna and her young playmates grew stronger with each game. Through their innocent games of fetch, they learned the value of camaraderie and the joy of giving and receiving unconditional love.

Image Source: Financial Times, [Visual Storytelling Team](#)



Generative AI has come a long way from ChatGPT's launch in 2022



Sora Prompt:

Create a video of a robot lawyer (wearing a blue suit) presenting to a classroom of businesspeople. The robot is on the stage at a podium and has a slide presentation in the background. The presentation is about US regulations.

FORBES > INNOVATION > AI

Claude AI Can Now Control Your Computer — Should You Worry?

Tor Constantino, MBA Contributor @

Tor Constantino is an ex-reporter, turned AI consultant & tech writer.

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Oct 23, 2024, 11:10am EDT

Updated Oct 23, 2024, 10:37pm EDT



Depiction of artificial intelligence controlling a human and vice versa. GETTY

How To Create And Customize An AI Podcast With Google's NotebookLM

By [Roger Dooley](#), Contributor. Keynote speaker & autho...



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Oct 24, 2024, 02:14pm EDT

NEWS

OpenAI lays out plans for GPT-5

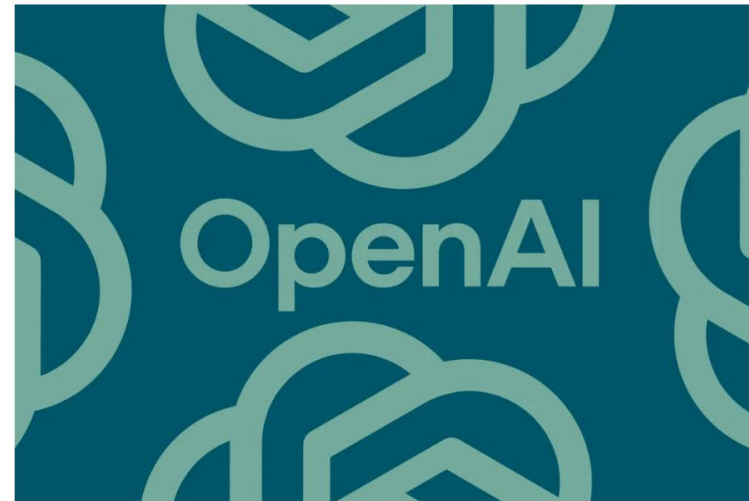


Image: The Verge

/ OpenAI CEO Sam Altman shared a roadmap with some details about GPT-4.5 and GPT-5.

by [Jay Peters](#)

Feb 12, 2025, 3:02 PM EST

[Link](#) [Facebook](#) [Twitter](#) | 17 Comments (17 New)

Since OpenAI released its “o1” model in September, you may be hearing about “Reasoning Models” or “Agentic AI.”

Agentic AI generally refers to AI systems with the capability to autonomously pursue goals with limited direct human supervision.

Whether these new models are truly Agentic AI, they are starting to display an important characteristic: “chaining.”

Chaining enables an AI system to take a sequence of actions in response to a single request, such as fact-checking its response and “overthinking” its response to a request.

Agentic AI can show its work.

September 12, 2024 Release

Learning to reason with LLMs

We are introducing OpenAI o1, a new large language model trained with reinforcement learning to perform complex reasoning. o1 thinks before it answers—it can produce a long internal chain of thought before responding to the user.

February 2, 2025 Release

Introducing deep research

An agent that uses reasoning to synthesize large amounts of online information and complete multi-step research tasks for you. Available to Pro users today, Plus and Team next.



Thought for 18 seconds ^

Understanding agentic AI

I’m noting that traditional AI systems often lack autonomous decision-making. Agentic AI, on the other hand, can make decisions and act independently to achieve specific objectives.

Laying out the distinctions

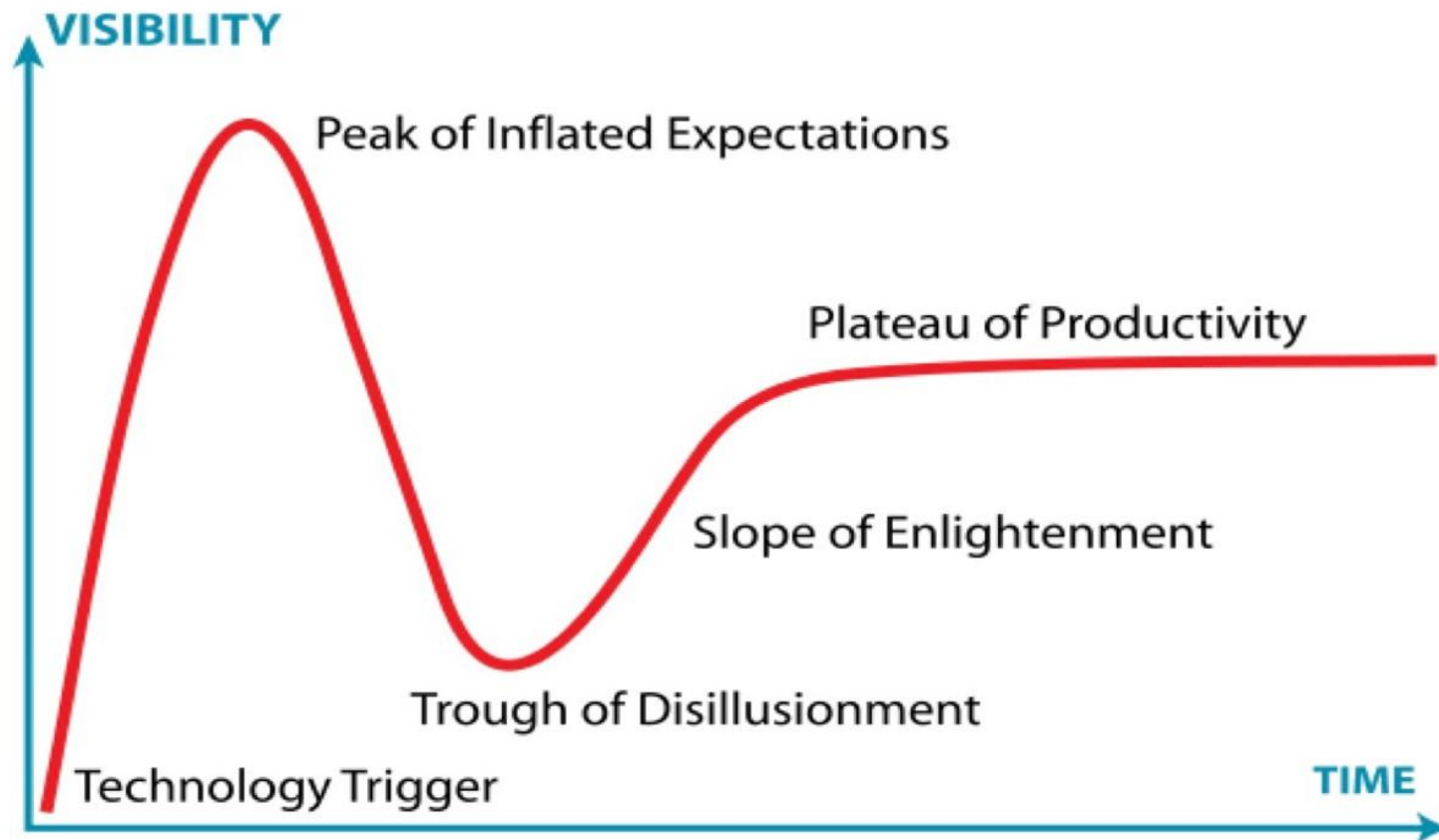
I’m breaking down the differences among agentic AI, traditional AI, and generative AI. Agentic AI has autonomy and decision-making, traditional AI relies on predefined rules, and generative AI can create new content, often using advanced models.

Defining agentic AI

Agentic AI, skilled in perceiving and making autonomous decisions, stands out for its adaptability and dynamic operational capacity.

But what goes up must come down?

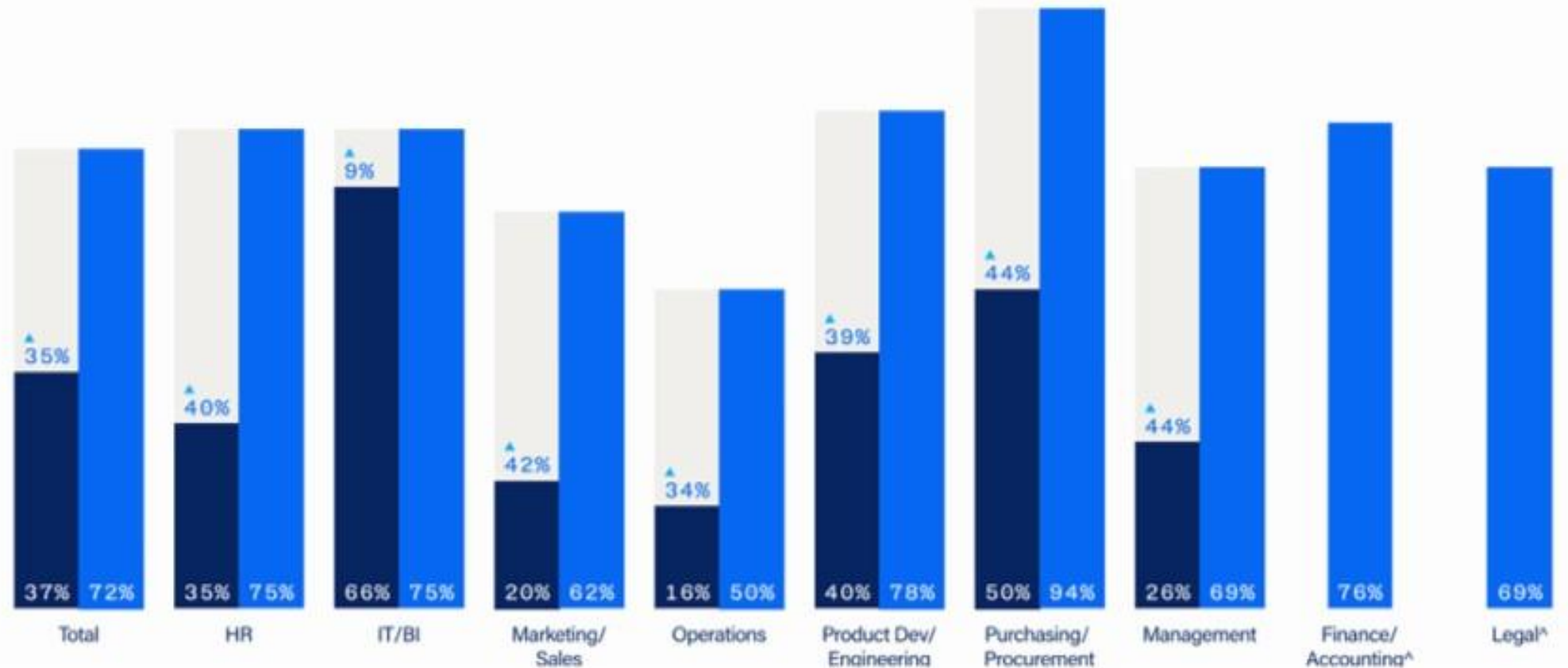
Gartner Hype Cycle



Maybe
not.

Usage in the Workplace: Using Gen AI at Least Once a Week

■ 2023 ■ 2024



Source: [“Growing Up: Navigating Generative AI’s Early Years”](#) AI at Wharton

Maybe
not.

The Top Use Cases are Not Always Top Performers— Idea Generation, Legal Contracts, and Fraud Detection Perform Well

Gen AI Use Case Performance
(Among Organizations Currently Using Gen AI)

Great
Performance

Good
Performance

Poor
Performance

Top 5 most
common use
cases for Gen AI

☒ Data Analyses and Analytics

63%

35%

Idea Generation/Brainstorming

62%

37%

Legal Contract Generation

61%

37%

Fraud Detection and Prevention

60%

38%

Email Generation

60%

37%

☒ Document and Proposal
Editing/Writing

60%

37%

☒ Personalized Marketing and
Advertising

60%

38%

Internal Support and Help Desk

60%

38%

☒ Document/Meeting Summarization

60%

37%

Providing Supporting Evidence
Towards a Data-driven Decision

60%

37%

Sales Content Creation

60%

37%

Predictive Maintenance

59%

39%

Customer Service and Support

59%

39%

Presentation and Report Creation

58%

40%

Customer Loyalty and Retention
Programs

58%

40%

Customer Research/Competitive
Intelligence

58%

40%

Employee Recruitment,
Onboarding, and Enablement

57%

39%

☒ Marketing Content Creation

57%

41%

Product/Service Design and
Development

56%

41%

Risk Management

55%

43%

Financial Forecasting and Planning

54%

45%

Predictive Customer Behavior

53%

42%

Desk Research/Secondary
Research/Literature Summarization

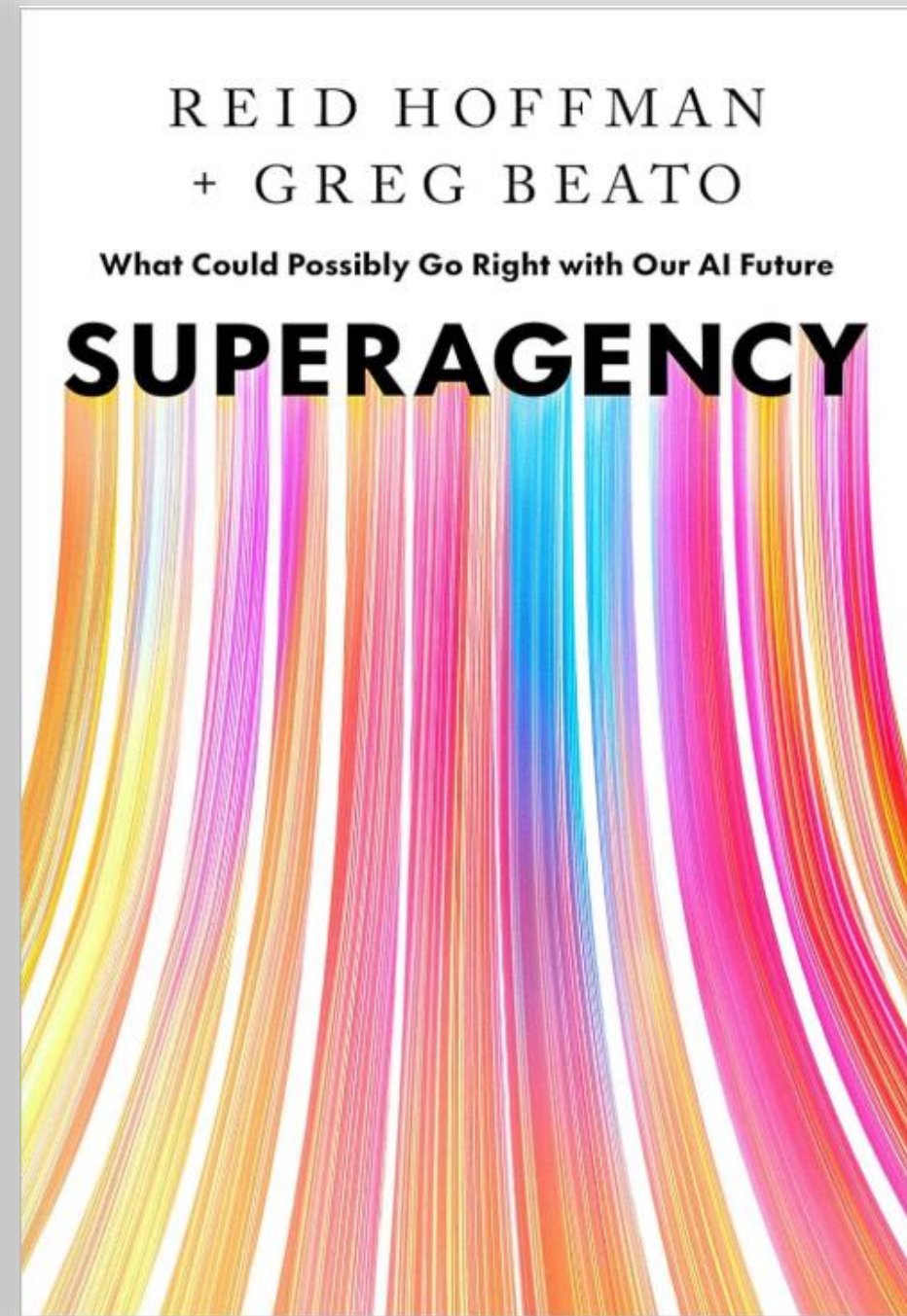
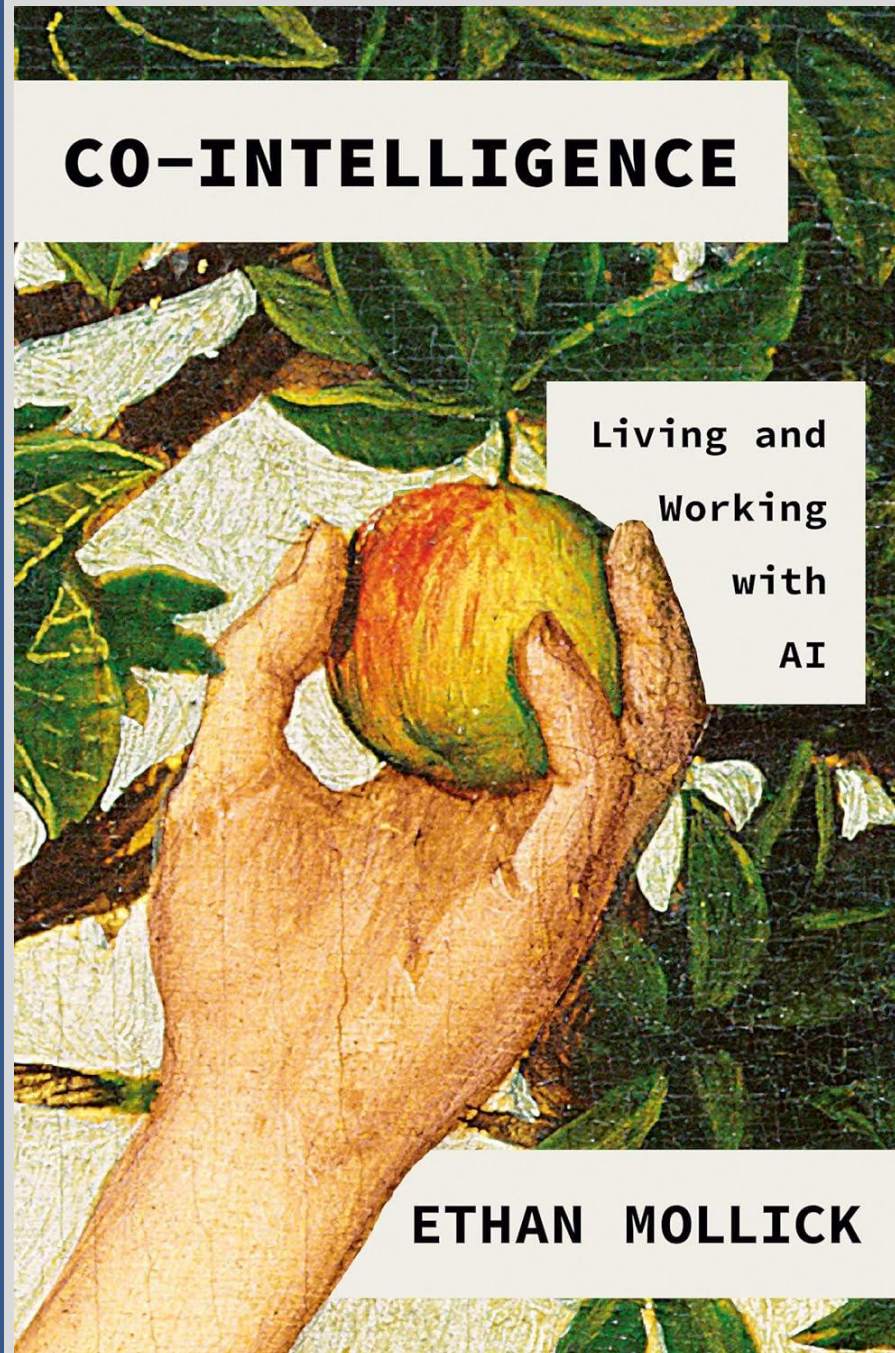
53%

45%

Source: [“Growing Up: Navigating Generative AI’s Early Years”](#) AI at Wharton

AI is becoming pervasive in the workplace.

How should we think about implementing these powerful but nascent tools?





The Precautionary Principle vs. Permissionless Innovation

Embracing AI: Are You a Doomer, Gloomer, Zoomer, or Bloomer?

February 4, 2025 • 5 min read

LinkedIn co-founder Reid Hoffman recently spoke at Wharton about the four ways people relate to AI, and why everyone will need to participate in our AI-powered future.



“Guilty until proven innocent”

“Move fast and break things”



“The risk is too great”

“Iterative progress”

Risk-Based AI Regulation

The Brussels Effect:
Europe's cautious approach shaped early AI regulation.

The EU AI Act



- The EU Artificial Intelligence Act was first proposed by the European Commission in April 2021, endeavoring to establish a global framework for regulating AI systems.
- It was formally adopted in May 2024, and began entering effect in phases, beginning in August 2024.
- Through years of deliberation, it framed a **global shift toward risk-based AI regulation**.
- **Even for a U.S. perspective**, it is important to understand key concepts from the EU AI Act, particularly its risk categories.

How do we categorize these risks?

- **Unacceptable Risk:** These systems are banned entirely within the EU. This includes applications that **threaten people's** safety, livelihood, and fundamental rights. **This ban took effect this month (February).**
 - Examples include social credit scoring, emotion recognition systems at work and in education, and untargeted scraping of facial images for facial recognition.
- **High Risk:** These systems pose a significant risk and **require strict compliance measures.**
 - Examples include AI used in
 - critical infrastructure (e.g., transportation, water, electricity),
 - Essential services (e.g., insurance, banking)
 - Areas with a high potential for bias (e.g., education, medical devices, vehicles, recruitment)
- **Limited Risk:** These systems require some level of transparency to **ensure user awareness.**
 - Examples include chatbots and AI-powered marketing tools where users should be informed that they're interacting with a machine.
- **Minimal Risk:** These systems **pose minimal or no identified** risk and face no specific regulations.
 - Examples include spam filters, basic recommendation systems, etc.



Some states are following the EU's lead on AI regulation

Although not as comprehensive as the EU AI Act, it speaks to the same concerns about regulating “High-Risk AI Systems” (HRAIS).

What makes an AI system a HRAIS is when it's deployed, it makes or is a **substantial factor** in making **a consequential decision**.

And what decisions are consequential?

When it materially effects . . .

- Educational opportunities
- Employment opportunities
- Financial or lending services
- Essential government service
- Healthcare services
- Housing
- Insurance
- Legal Services





Some states are following the EU’s lead on AI regulation

Colorado was the first state to comprehensively regulate the development and use of high-risk artificial intelligence systems.

Some states have passed more targeted AI regulations, and many more are considering legislation.

But the United States does not have a comprehensive AI Regulatory Framework.



LAWS SIGNED (TO DATE)																			
Colorado						SB 205	D	1,2	1,2			1,2	1	1,2	2			1	1,2
Utah						SB 149	G						1,2						
California						AB 2013	G					2							
						SB 942	G					2	2						
ACTIVE BILLS																			
California						SB 11	D						1,2						
Florida						HB 369	G					2	2						
Hawaii						SB 59	D	1	1			1	1	1		1		1	1
Idaho						HB 127	A						1						
Illinois						SB 1792	G						1,2						
Maryland						HB 823	G					2							



Federal Activity During the Biden Administration

A careful approach to understand AI and its risks

Biden-Harris Executive Order on Artificial Intelligence

The Executive Order directed several agencies to take extensive action including:

- Directing several agencies to report on and address AI's safety and security risks;
- Hire AI Talent for the US Government;
- Supporting Responsible AI innovation; and
- Support the US Government's leadership on AI issues abroad.





Federal regulators moved from principles to enforcement



Operation AI Comply: Detecting AI-infused frauds and deceptions

By: Alvaro Puig, Consumer Education Specialist, FTC

September 25, 2024



Federal regulators followed the Biden Executive Order's principles and began issuing AI-specific guidance. Toward the end of his term, they started to bring enforcement actions.

In September 2024, the FTC announced "Operation AI Comply," along with five enforcement actions based on Section 5 of the FTC Act (Unfair Trade Practices).

The charges all relate to settlements for AI hype and AI-washing marketing materials. Most of these actions were unanimously approved, so we should expect similar scrutiny under the new administration.

Other trends that may continue . . .



The federal enforcement priorities and laws will shift to match different priorities from the new administration.

However, voluntary risk management frameworks have been well-received, and the Bipartisan House Task Force on AI worked with domain experts to publish extensive recommendations and guiding principles across several industries.



Trump Administration's AI Priorities

A different direction . . .

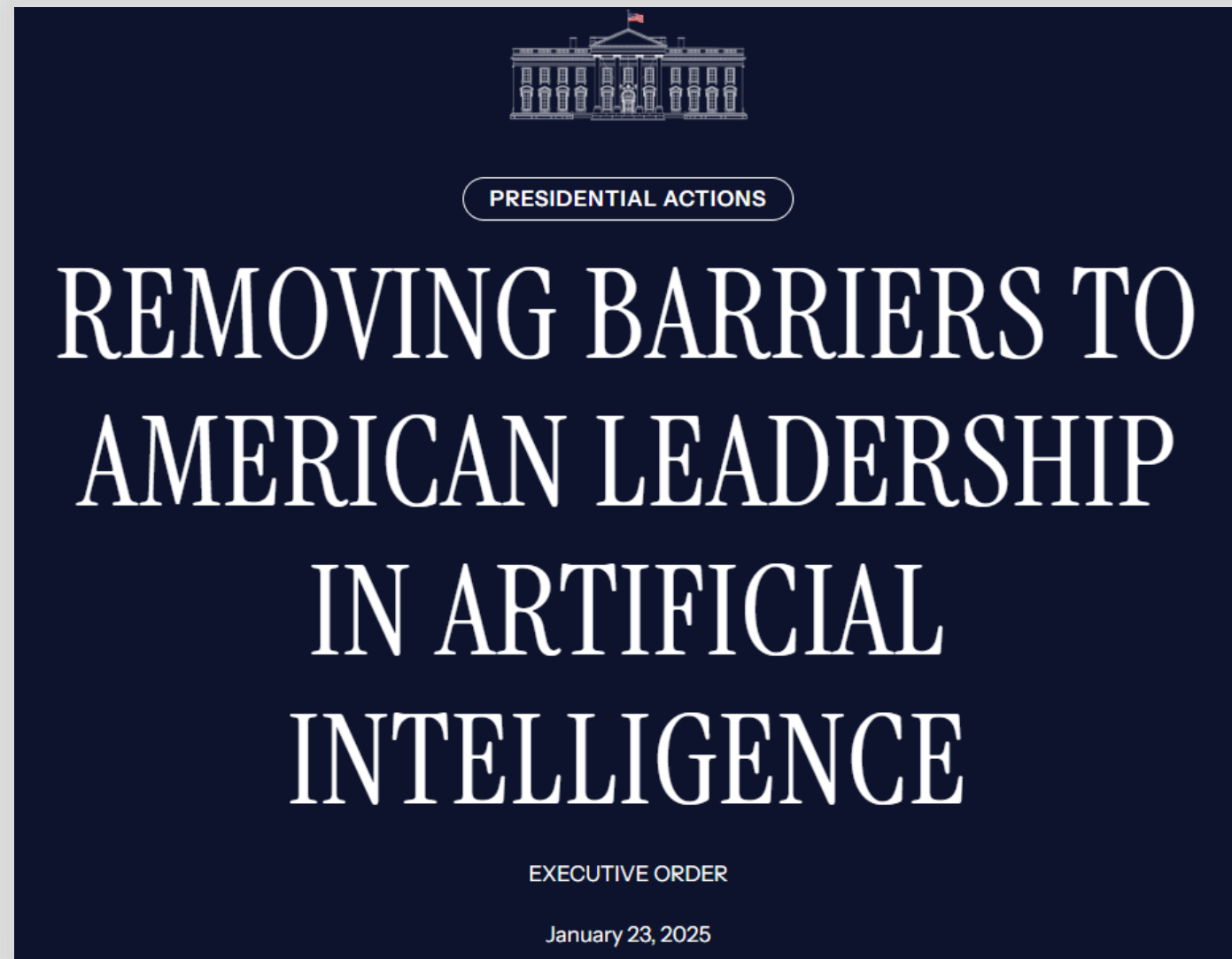
But perhaps not as far as the messaging suggests?

Comparing the Biden and Trump AI Policies

- Biden's EO and priorities aimed to ensure AI systems are thoroughly assessed for hazards like bias, privacy, and security before deployment.
- His administration also promoted voluntary frameworks, such as an AI Bill of Rights (a voluntary framework to protect consumers from AI harms).
- Overall, Biden's policy **focused on minimizing risks** (to privacy, civil rights, etc.), investing in AI research, and **international cooperation** on AI safety.
- Upon taking office in January 2025, President Trump **immediately rescinded Biden's AI Executive Order** and reversed course.
- Trump characterized Biden's AI policies as "harmful . . . onerous and unnecessary government control" that **stifled innovation**.
- Within days, Trump issued his own AI Executive Order declaring a new policy: the U.S will "**sustain and enhance America's global AI dominance**" to promote economic and national security.

Trump's Executive Order on Artificial Intelligence

- Trump's Executive Order primarily signals a shift from risk avoidance to promotion of AI innovation.
- The EO instructs the development of an AI strategic plan within 180 days (i.e., July 2025).
- It also instructs the review of policies and budgets consistent with the change in priorities.



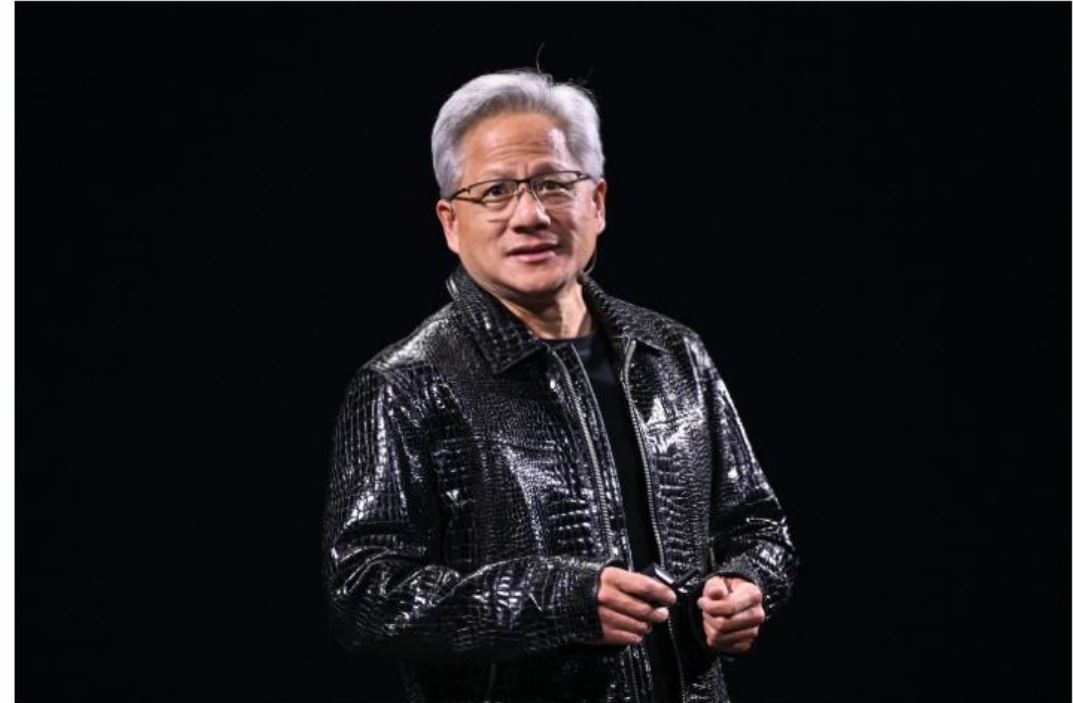
A new challenger emerges?

TECH · A.I.

What is China's DeepSeek and why is it freaking out the AI world?

BY BLOOMBERG, SARITHA RAI AND NEWLEY PURNELL

January 27, 2025 at 11:46 AM EST



The much better efficiency of DeepSeek puts into question the need for vast expenditures of capital to acquire the latest and most powerful AI accelerators from the likes of Nvidia Corp.

ARTUR WIDAK—NURPHOTO VIA GETTY IMAGES

Setting aside President Trump's messaging, his pro-business and deregulatory priorities for the AI industry were not very surprising and fairly consistent with past changes in administration. The practical impact is that regulators will put less focus on AI ethics programs or bias audits, in favor of a lighter regulatory touch and incentivizing AI R&D. However, the emergence of credible competition from China could motivate a more dramatic shift.

AI Action Summit (Paris)



IMAGE CREDITS: NATHAN LAINE / BLOOMBERG / GETTY IMAGES

GOVERNMENT & POLICY



In Paris, JD Vance skewers EU AI rules, lauds US tech supremacy

Ingrid Lunden — 4:37 AM PST · February 11, 2025

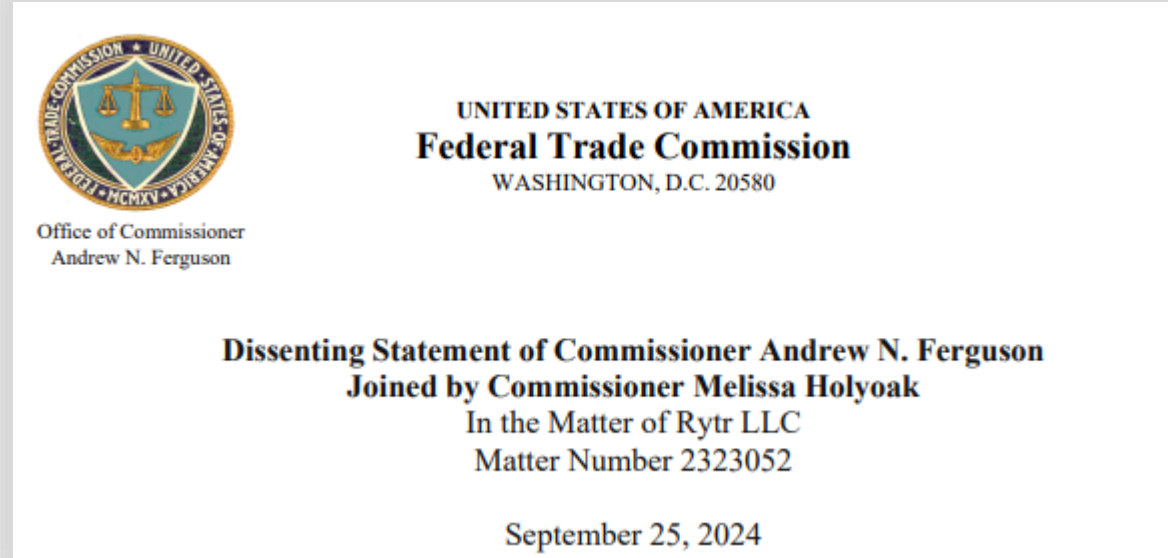
“This doesn’t mean, of course, that all concerns about safety go out the window, but focus matters. And we must focus now on the opportunity to catch lightning in a bottle, unleash our most brilliant innovators, and use AI to improve the well-being of our nations and their peoples[.]”

Things to Watch

Reestablishing PCAST: President Trump reconstituted the **President's Council of Advisors on Science and Technology (PCAST)** on Jan 23, 2025.

Unlike his first term (when PCAST was dormant for years), Trump 2.0 is leveraging PCAST early. It will be co-chaired by *Michael Kratsios* (Trump's Science & Tech advisor) and *David Sacks* (appointed as the new **"AI & Cryptocurrency Czar."**)

Trump AI Action Plan: Trump's Executive Order calls for an interagency team (led by the White House S&T Advisor, AI/Crypto Czar, and National Security Advisor) to develop an AI Action Plan by late July 2025. This Action Plan will outline concrete steps to implement Trump's AI dominance vision (covering R&D, regulatory changes, and possibly workforce/training needs).



Questions?

Think of something later?

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