

Why China is winning the AI race

John Thornhill writes:

Viewed from abroad, it seems only a matter of time before China emerges as the AI superpower of the 21st century.

Here in the West, our initial instinct is to focus on America's significant lead in semiconductor expertise, its cutting-edge AI research, and its vast investments in data centers. The legendary investor Warren Buffett once warned: "Never bet against America." He is right that for more than two centuries, no other "incubator for unleashing human potential" has matched the US.

Today, however, China has the means, motive, and opportunity to commit the equivalent of technological murder. When it comes to mobilizing the whole-of-society resources needed to develop and deploy AI to maximum effect, it may be just as rash to bet against.



The data highlights the trends. In AI publications and patents, China leads. By 2023, China accounted for 22.6% of all citations, compared with 20.9% from Europe and 13% from the US, according to Stanford University's Artificial Intelligence Index Report 2025. As of 2023, China also accounted for 69.7% of all AI patents. True, the US maintains a strong lead in the top 100 most cited publications (50 versus 34 in 2023), but its share has been steadily declining.

Similarly, the US outdoes China in top AI research talent, but the gap is narrowing. According to a report from the US Council of Economic Advisers, 59% of the world's top AI researchers worked in the US in 2019, compared with 11% in China. But by 2022 those figures were 42% and 28%.

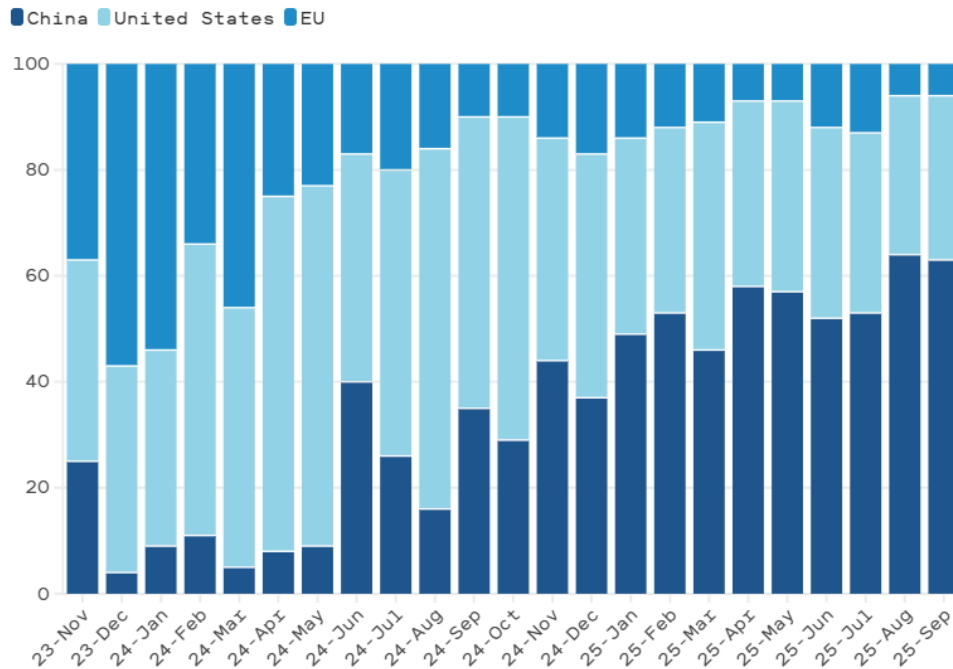
The Trump administration's tightening of restrictions for foreign H-1B visa holders may well lead more Chinese AI researchers in the US to return home. The talent ratio could move further in

China's favor.

Regarding the technology itself, US-based institutions produced 40 of the world's most notable AI models in 2024, compared with 15 from China. But Chinese researchers have learned to do more with less, and their strongest large language models—including the open-source DeepSeek-V3 and Alibaba's Qwen 2.5-Max—surpass the best US models in terms of algorithmic efficiency.

China's open AI models are overtaking the west's

Global regional model adoption (%), by month, Nov 2023 to Sep 2025



Source: Air Street Capital

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Where China is really likely to excel in future is in applying these open-source models. The latest report from Air Street Capital shows that China has now overtaken the US in terms of monthly downloads of AI models. In AI-enabled fintech, e-commerce, and logistics, China already outstrips the US.

Perhaps the most intriguing—and potentially the most productive—applications of AI may yet come in hardware, particularly in drones and industrial robotics. With the research field evolving toward embodied AI, China's advantage in advanced manufacturing will shine through.

Dan Wang, the tech analyst and author of Breakneck, has rightly highlighted the strengths of China's engineering state in developing manufacturing process knowledge—even if he has also shown the damaging effects of applying that engineering mentality in the social sphere. "China has been growing technologically stronger and economically more dynamic in all sorts of ways," he told me. "But repression is very real. And it is getting worse in all sorts of ways as well."

I'd be fascinated to hear from you, Caiwei, about your take on the strengths and weaknesses of China's AI dream. To what extent will China's engineered social control hamper its technological ambitions?

Caiwei Chen responds:

Hi, John!

You're right that the US still holds a clear lead in frontier research and infrastructure. But "winning" AI can mean many different things. Jeffrey Ding, in his book *Technology and the Rise of Great Powers*, makes a counterintuitive point: For a general-purpose technology like AI, long-term advantage often comes down to how widely and deeply technologies spread across society. And China is in a good position to win that race (although "murder" might be pushing it a bit!).

Chips will remain China's biggest bottleneck. Export restrictions have throttled access to top GPUs, pushing buyers into gray markets and forcing labs to recycle or repair banned Nvidia stock. Even as domestic chip programs expand, the performance gap at the very top still stands.

Yet those same constraints have pushed Chinese companies toward a different playbook: pooling compute, optimizing efficiency, and releasing open-weight models.

MIT Technology Review subscribers can read the rest of Caiwei's reply, and John's response, [here](#).