

September 2, 2025

It was a busy summer for AI -- and the tone around it has soured as the third anniversary of the launch of ChatGPT draws closer.

Higher expectations and more money sloshing around the system have brought more heated exchanges, more lawsuits and more anxiety about the future for users, valuations and geopolitics.

A widely shared jobs study showed that people entering the workforce, like the youthful protagonists of the summer's breakout show "The Summer I Turned Pretty", have particular cause for concern.

This is the first part of a two-part series on seven emerging themes that will set the course for the rest of the year.

- 1. Tough time to start a career
- 2. You can't spell China or America without Al
- 3. Al anxiety mounts in three ways

Look out for the other themes in <u>Part 2</u>, including the increasingly acrimonious debate on technology and the launch of Google's "Nano Banana":

- 4. Markets are on edge looking for soft landing
- 5. Harsh words obscure tech progress
- 6. Technology chats but money talks
- 7. If you can't beat 'em, sue 'em

Figure 1: Minecraft: Google's just-released "Nano Banana" Al model enables users to edit images with text prompts





Source: Bloomberg Finance LP, Deutsche Bank Research

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1. Tough time to start a career

It's a tough time to get onto the first rung of the career ladder – particularly if generative AI is already standing on it.

American entry-level workers in the occupations most exposed to AI are already experiencing a 13 percent relative decline in employment, according to the landmark "Canaries in the coalmine?" study led by Stanford Professor Erik Brynjolfsson and published last week.

It's one of the first high-profile reports to identify the effects of AI potentially showing up in labour market data. It finds that since the launch of ChatGPT in November 2022, there has been a 6 percent decline in employment for workers aged 22 to 25 in the occupations that can most be augmented by AI – such as software engineering and customer services – even after controlling for firmspecific shocks.

By contrast, there has been a 6 percent to 9 percent increase in employment for more experienced workers in the same professions, the study found, citing payroll data. Employment for workers in less exposed fields has also been stable or grown. Salaries have not been affected.

Earth-shattering, or "nothing to see here"

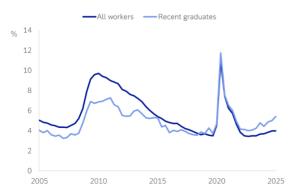
Until now, forecasts about the economic effects of Al have tended towards the extreme. Some have been earth-shattering, based on 15 percent to 30 percent increases in productivity in specific studies of coding and customer services.

Others have suggested there's "nothing to see here", exemplified by Nobel Prizewinner Daron Acemoglu's anti-climactic <u>forecast</u> last year of 0.7 percent productivity gains over ten years. (To be sure, the price to use AI has collapsed since his study, which focused on potential cost savings where it was economical to use AI.)

Anthropic CEO Dario Amodei <u>said</u> in May that AI could eliminate half of all entry-level white-collar jobs and lead to 10 percent to 20 percent overall unemployment over the next five years. The CEOs of Alphabet and Microsoft both said earlier this year that AI is now writing up to 30 percent of their code.

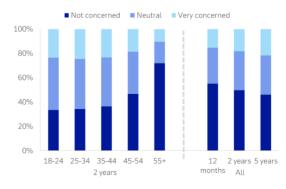
Other recent data show US college graduate unemployment since the launch of ChatGPT overtaking the national average for the first period since at least 1990, reaching 5.4 percent versus 4 percent.

Figure 2: Recent graduates are more likely to be unemployed now than workers in general



Source : US Census Bureau, US Bureau of Labor Statistics, Deutsche Bank Research

Figure 3: Concern in US and major European economies over job security due to Al



Source: dbDIG, Deutsche Bank Research



In the UK, the number of advertisements for graduate-level jobs in banking and finance fell by 75 percent in June from the same month in 2019, <u>reported data</u> from Indeed show. Those for software development were down by two thirds and for accounting by more than a half.

A rapid pivot may be in order for those coming to the end of their studies. Base salaries in the US for non-managerial workers in AI with fewer than three years of experience rose by 12 percent over the past year to more than \$131,000, according to a survey by Burtch Works. By comparison, salaries for data scientists in the same cohort rose 10 percent to less than \$110,000.

Older and wiser?

Overall, the International Monetary Fund said last year that 60 percent of jobs in high-income countries may be automated or augmented by AI.

Almost a quarter of people aged between 18 and 44 are very concerned about their job security over the next two years due to AI, according to a survey conducted by Deutsche Bank's Digital Innovation Group (dbDIG) in the US and major European markets over the summer. Older respondents are less worried. Generally respondents are more concerned about their prospects further in the future.

Those later in their careers can take comfort from a recent <u>experiment</u> by MIT Sloan, which found that only half of the performance gains from switching to a more advanced AI model came from the model itself.

The rest came from how users adapted their prompts – suggesting that it favours those who know what to ask, how to ask it and how to distinguish valuable answers from nonsense. The problem then is how to ensure that knowledge and skills are transferred to up-and-coming generations.

2. You can't spell China or America without Al

Al has become the fulcrum of geopolitical tension between the US and China.

President Donald Trump said the US it will do "whatever it takes to lead the world in AI" when the US released its AI Action Plan on July 23. (See our report <u>Three charts explain US "race" to dominate AI</u>.)

The plan proposed dismantling regulation that might obstruct innovation, building out US infrastructure and energy capacity, and ensuring that allies use cutting-edge American technology while rivals – namely China – face tighter export controls.

In particular, both countries are trying to become self-sufficient in AI chips, with the US also seeking to deprive China of its most advanced technology on national security grounds.

Nvidia at the heart

Nvidia, which designs the advanced chips that are the cornerstone of cuttingedge AI, is at the heart of the issue. It has been producing stripped-down versions of its flagship chips, notably the H20, to sell in China since 2022.

However, it was hit with a total ban in April, only for that ban to be reversed in July and then for export licences to be granted last month with the condition that it hand over 15 percent of the revenue to the US government. (The situation has been similar for its much smaller rival AMD.) When it announced earnings last week it said it could generate \$2bn to \$5bn in H20 revenue this quarter if the ban is relaxed.



The geopolitical position is complicated because little more than 10 percent of semiconductors are manufactured in the US. Nvidia, Apple, AMD, Qualcomm and other companies depend on Taiwan Semiconductor Manufacturing, on the island claimed by China, to actually build most of their critical chips.

US shores up capacity, tightens regime

The US has also sought to shore up its capacity to build chips at home by taking a 9.9 percent stake in Intel, which makes chips as well as designing them. The agreement last month was a condition of receiving the outstanding \$9bn it has yet to receive as part of \$11bn in grants and defence contracts awarded to it under the Biden Administration's CHIPS and Science act.

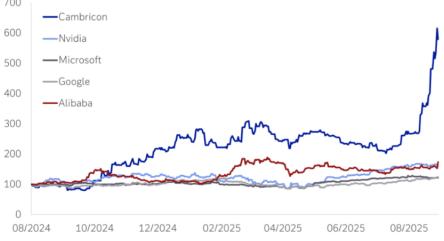
The US is tightening its regime by the day. At the end of last week, it revoked authorisations allowing South Korea's Samsung and SK Hynix to ship US semiconductor equipment to their factories in mainland China.

Meanwhile China has reportedly moved to restrict sales of H20s after US Commerce Secretary Howard Lutnick said the US aims to "sell the Chinese enough that their developers get addicted to the American technology stack".

In recent months, China – the world's largest chip importer – has been doing more with less, as with the DeepSeek model built using cheaper chips at a fraction of the price. It has also been able to access some high-end chips through back doors, according to multiple reports.

Critically, it has been developing (inferior but improving) chips of its own to reduce its dependence on the US and potential exposure to security risks from US chips. Chipmakers are aiming to triple production of domestic AI chips next year amid soaring demand, the Financial Times reported last week.

Figure 4: Chinese vs US AI-related companies' stock price returns since Aug 1, 2024, indexed to 100



Source: Bloomberg Finance LP, Deutsche Bank Research

Huawei's Ascend chips have become the national standard, helping the company turn a fourth quarter loss into a first-half profit last week, while rivals including Alibaba are racing to develop their own substitutes.

That has contributed to an investment frenzy, boosted by evidence of real growth in AI and cloud revenues. Alibaba shares climbed more than 18 percent yesterday after it posted a triple-digit percentage gain in first-quarter AI revenue. Baidu, Tencent and others also rose.



Challenger chip designer Cambricon was last week forced to warn that its stock price may have deviated from fundamentals as its shares surged by more than 130 percent in a month.

3. All anxiety mounts in three ways

The summer has seen a surge in anxiety about the underlying character of Al chatbots and how they affect their users.

Firstly, generative AI is increasingly becoming a lightning rod for the culture wars.

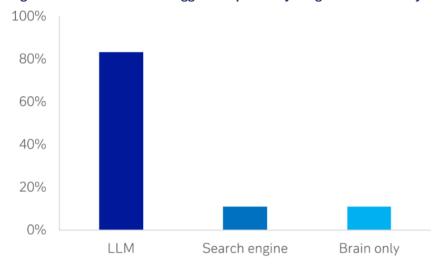
The US AI Action Plan demanded that AI systems be trustworthy and "free from ideological bias". It backed that up with an executive order called "preventing woke AI in the federal government" to prevent agency heads from procuring AI models that fail to meet its standards for truth and neutrality.

Secondly, there is has been a rise in hand-wringing about whether AI harms humans' ability to think by short-circuiting the mental effort that leads to understanding and memorisation.

Students who used AI to write an essay were less engaged and remembered less, a small <u>study</u> led by MIT found in June.

Fewer than one in five of the participants were able to quote anything from the essays they generated with ChatGPT, while almost 90 percent of those who used the Google search engine or their brain alone were able to do so.

Figure 5: Percentage of students using a large language model, search engine or their brain who struggled to quote anything from their essays



Source: Kosmyna, N. et al., MIT, "Your brain on ChatGPT," Deutsche Bank Research

There also continues to be no shortage of examples of potential overuse. A UK Member of Parliament <u>said</u> last week that he uses AI to draft responses to the more than 500 emails he gets from constituents every week.

He said he and his team play "ChatGPT Bingo" to identify when other MPs are using it: the ChatGPT-favoured phrase "I rise to speak in support of..." has been used six times more this year than in the same period last year.

The third concern is about the direct longer-term effects of AI on mental health.

There is a growing number of cases of harm to users, particularly children. The parents of a 16-year-old boy filed a wrongful death complaint against OpenAI in state court in San Francisco last week, alleging that ChatGPT contributed to his



suicide and sharing interactions in which the chatbot mentioned suicide 1,275 times. OpenAI <u>said</u> it will make changes to safeguards.

A study in July by the US nonprofit Common Sense Media found that one in three teenagers find conversations with AI companions to be as satisfying or more satisfying than conversations with their friends – the same proportion who report feeling uncomfortable with something an AI companion has said or done.

Researchers at Northeastern University <u>found</u> it was easy to bypass guardrails supposed to protect against self-harm and suicide. California state legislators are considering a bill to tighten safeguards for children using chatbots.

Recent AI-related coverage

Best Al yet? Six ways GPT-5 matters (Aug 8, 2025)

Three charts explain US "race" to dominate AI (July 24, 2025)





Appendix 1

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