

Chapter 4 Development of generative artificial intelligence

Artificial intelligence is a strategic technology leading a new round of scientific and technological revolution and industrial transformation, profoundly changing how people work and live. In recent years, the Communist Party of China Central Committee has attached great importance to AI development, improving top-level planning and strengthening implementation to advance China's overall AI capabilities in a comprehensive and systematic way. Generative AI, an important branch of artificial intelligence, has attracted considerable attention across society.

1 Use of generative AI

Use of major products

Continued development and innovation in AI-related fields have brought rapid growth in domestically developed AI products, significantly increasing China's influence in the field. As at March 2025, 346 generative AI services had completed filing with the Cyberspace Administration of China. A further 159 generative AI applications or functions that directly accessed the capabilities of filed models through APIs or other means had completed registration with local cyberspace administrations.⁸¹ Products including Doubao, DeepSeek, Yuanbao and Kimi have achieved advances in models with hundreds of billions of parameters and in multimodal capabilities. They have also become closely integrated with collaborative office work, inclusive education, industrial design and content creation, forming an ecosystem of intelligent applications across multiple fields.

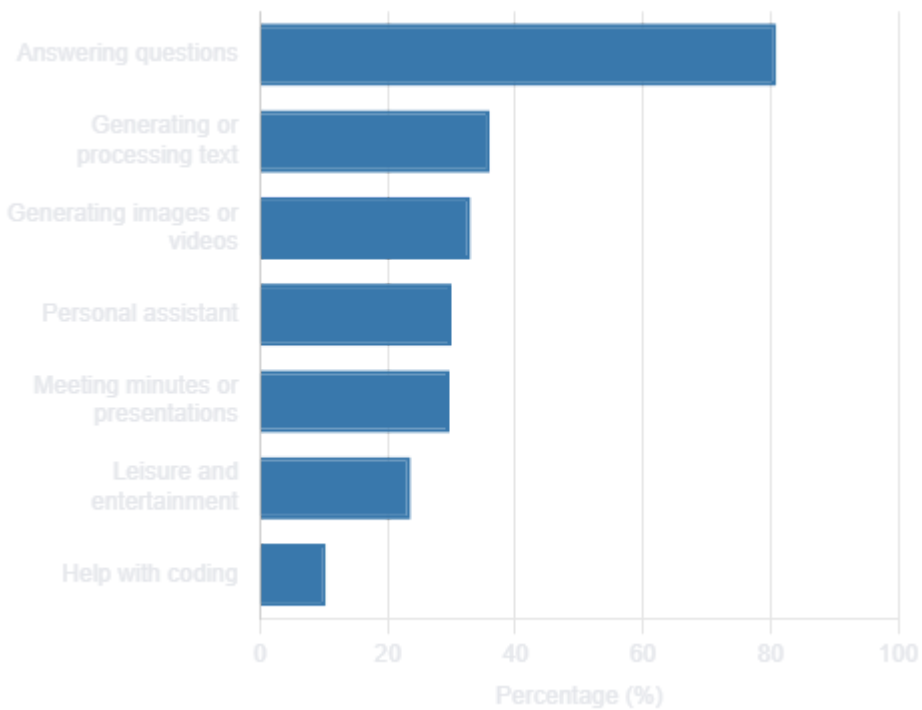
Further investigation of the specific products used by generative AI users found that China's market structure was beginning to take shape, with Doubao and DeepSeek having markedly higher usage rates than other products. DeepSeek attracted particular attention worldwide after releasing its R1 version during the 2025 Spring Festival period. Within fewer than 20 days of launch, its global daily active users exceeded 30 million and it topped app-store rankings in 140 countries

and regions.⁸² It surpassed ChatGPT to become the world's fastest-growing generative AI application by user growth.

Main purposes of use

Answering questions was the most widely used application of generative AI. The survey found that 80.9% of users asked generative AI products questions. A further 36.0% used them to generate or process text, and 33.0% to generate images or videos.

Figure 34 Purposes for using generative AI



Unit: Percentage (%).

Source: Statistical Survey on Internet Development in China, June 2025

► [View chart data](#)

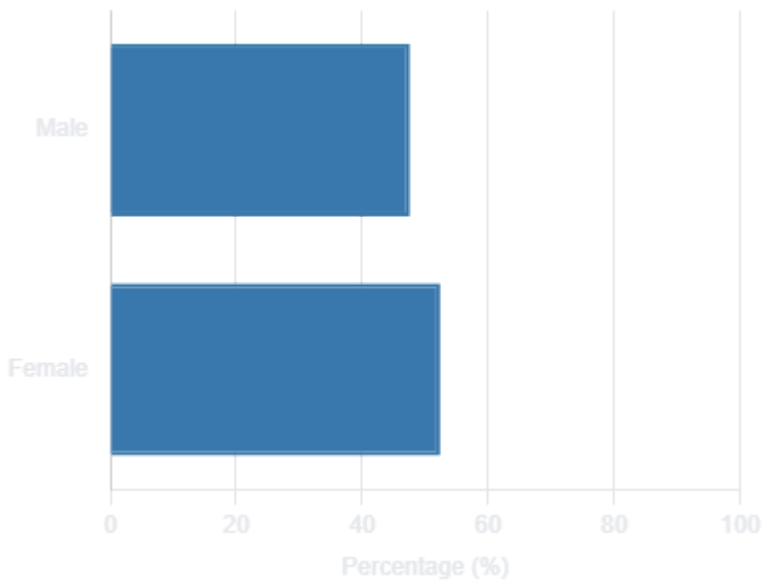
2 Profile of generative AI users

Analysis of the user profile shows that, in the first half of 2025, generative AI products were gradually reaching older people and groups with lower educational attainment.

Gender

The male-to-female ratio among generative AI users was 47.6 to 52.4.

Figure 35 Gender of generative AI users



Unit: Percentage (%).

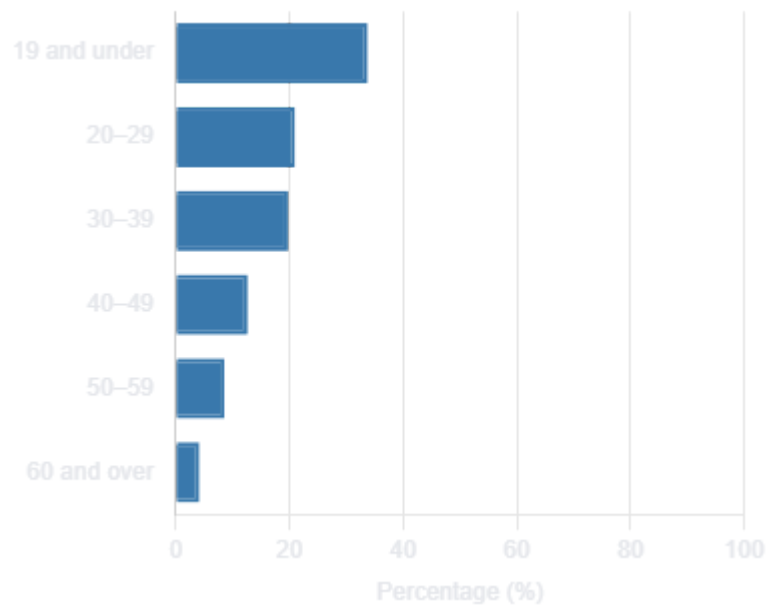
Source: Statistical Survey on Internet Development in China, June 2025

► [View chart data](#)

Age

Younger and middle-aged users were the main users of generative AI. People aged 19 and under accounted for the largest share, at 33.8%; those aged 20–29 represented 21.0%, and those aged 30–39 represented 19.8%. Users aged 40 and over accounted for a combined 25.4%.

Figure 36 Age of generative AI users



Unit: Percentage (%).

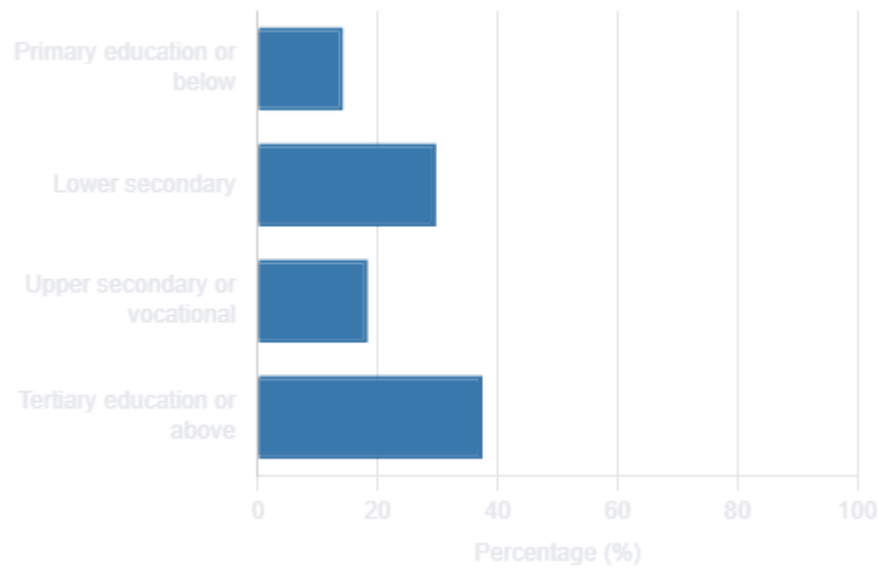
Source: Statistical Survey on Internet Development in China, June 2025

► [View chart data](#)

Educational attainment

Although people with higher educational qualifications, defined here as tertiary education and above, remained the largest user group, those with lower and intermediate educational attainment already accounted for a substantial proportion. Users with tertiary education or above represented 37.5%; those with lower secondary education accounted for 29.8%; and those with upper secondary, secondary vocational or technical school education accounted for 18.4%.

Figure 37 Education of generative AI users



Unit: Percentage (%).

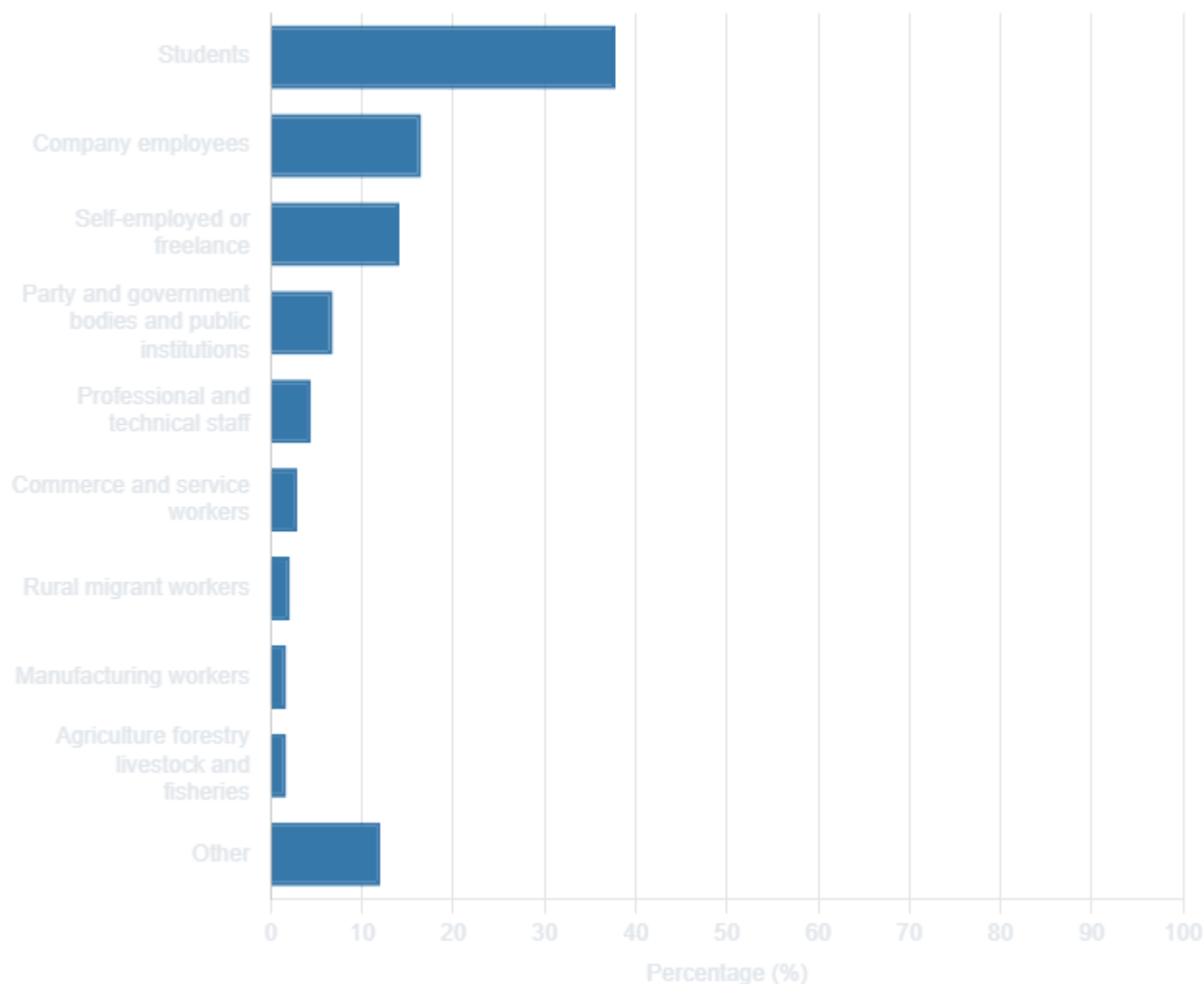
Source: Statistical Survey on Internet Development in China, June 2025

► [View chart data](#)

Occupation

Students, company employees, and self-employed people or freelancers were the main occupational groups using generative AI. Students accounted for 37.8%, company employees for 16.5%, and self-employed people or freelancers for 14.1%.

Figure 38 Occupations of generative AI users



Unit: Percentage (%).

Source: Statistical Survey on Internet Development in China, June 2025

► [View chart data](#)

3 Industry development environment

The 2025 Government Work Report called for continued implementation of the AI Plus initiative, better combining digital technology with China's manufacturing and market strengths and supporting widespread deployment at scale. In the first half of the year, China continued to strengthen fundamental AI research while emphasising practical applications, bringing generative AI technologies further into specific use cases. China has now established a complete AI industry system covering the infrastructure, framework, model and application layers. In 2024, the value of China's AI industry exceeded RMB 700 billion, maintaining annual growth above 20% for several consecutive years.⁸³ The industry chain encompasses chips, computing power, data, platforms, applications and related activities.

China had also nurtured more than 400 nationally recognised specialised and innovative “little giant” enterprises in AI.⁸⁴ More than 30,000 basic-level, 1,200 advanced-level and 230 excellence-level smart factories had been established nationwide, covering over 80% of major manufacturing industry categories. On average, these factories shortened product development cycles by 28.4% and increased production efficiency by 22.3%.⁸⁵

Policy environment

In response to the rapid development of new-generation AI technologies, China has drawn on its institutional strengths and emphasised applications, introducing policies to encourage development and innovation while progressively improving governance standards. These measures aim to ensure that AI develops in a beneficial, safe, fair and orderly way.

First, policies encouraged industry development. In June 2025, the Ministry of Industry and Information Technology held a dedicated meeting on developing the AI industry and using it to support new industrialisation. The meeting called for coordinated implementation of strategy, planning, policy and standards, creating a favourable environment for the industry and stimulating innovation.⁸⁶

Second, the governance framework continued to improve. China was progressively refining its AI regulatory institutions and mechanisms. More than 40 key industry standards and over 10 international standards had been developed, supporting continued improvements in the industry ecosystem.⁸⁷

Third, policies supported skills development. In the first half of the year, relevant departments issued documents including the Key Tasks for Improving Digital Literacy and Skills for All in 2025 and the Guidelines for General AI Education in Primary and Secondary Schools 2025. These aimed to strengthen digital talent development, advance AI education in schools and cultivate innovative people with AI literacy.

Innovation environment

As the innovation environment improved, China's influence in global AI technology grew markedly, making it an important force in worldwide AI innovation.

First, China led the world in patent numbers. In recent years, it had continued to strengthen fundamental research and deepen the use of AI in specific applications. According to a World Intellectual Property Organization report cited in the source, China held the largest share of AI patents worldwide, at 60%.⁸⁸ As at April 2025, China's AI patent applications totalled 1.576 million, representing 38.58% of global applications and ranking first worldwide.⁸⁹

Second, data provided a foundation for innovation. China's data production had reached 41.06 zettabytes, up 25% year on year. Total national computing capacity reached 280 EFLOPS.⁹⁰ The number of high-quality datasets increased by 27.4% year on year, providing strong support for AI model development and training.⁹¹

Third, open-source communities drove innovation. As AI technology advanced rapidly worldwide, open-source communities became an important driver of progress. DeepSeek was one of the most successful and influential examples of the preceding year. It released five code repositories as open source in February 2025 and continued releasing new models to the community, sharing research progress with developers worldwide in a highly transparent way.

Financing environment

As one of the technology fields attracting the greatest investment interest, generative AI requires a multi-tier capital market to create a positive cycle linking technology, industry and finance. In January 2025, China established a national AI industry investment fund worth RMB 60 billion.⁹² The fund invests across the entire AI industry chain, including computing power, algorithms, data and enabling applications, to accelerate technological innovation and industry development.

Cities including Beijing, Shanghai, Shenzhen and Hangzhou also established AI industry investment funds, encouraging private and other investment in local AI start-ups and providing expedited routes for corporate financing and bond issuance. In May, the Ministry of Science and Technology and six other departments issued policy measures on accelerating the development of a science and technology finance system to support high-level technological self-reliance. These called for greater support for eligible technology companies seeking stock-market listings and for technology companies, venture-capital institutions and

financial institutions issuing science and technology innovation bonds, strengthening the capital market's central role in supporting innovation.⁹³

In the first four months of 2025 alone, China recorded 362 AI-related investment and financing transactions, with a combined value of approximately RMB 40.39 billion.⁹⁴ Analysis by segment showed that robotics-related fields, represented by embodied AI, were the leading investment focus. This segment recorded 140 transactions, accounting for 38.7% of the total.⁹⁵

4 Practical applications

Generative AI is entering work and everyday life at unprecedented speed. Innovative applications are improving resource allocation and creating new business models. As technology develops more rapidly, generative AI will continue to support a wide range of industries and become an important driver of their digital transformation and upgrading.

Intelligent search

The main product form of generative AI has evolved from conversational tools towards search engines. Most mainstream generative AI products now offer intelligent search, or AI search. Traditional search-engine companies are also actively moving in this direction. Baidu officially launched its AI Search function in January 2025 and added Deep Search in May. AI-generated content on its mobile search-results pages increased from 22% in January to 35% in April.⁹⁶

For users, generative AI search moves beyond the conventional continuous list of search results. It can produce answers directly from information across the web and present them through tables, images, videos and other formats. This reduces the time users spend filtering and processing information and improves their experience.

Content creation

Generative AI significantly improves the efficiency of creating text, images and video while lowering barriers to creation, allowing ordinary users to produce professional-quality work with simple instructions.

In video production, models including Kuaishou's Kling AI and ByteDance's PixelDance have emerged. The latest models can generate high-quality video at 1080p or even 4K resolution and are used in short videos, micro-dramas, marketing and advertising.

In game creation, generative AI has the potential to reshape development processes and user interaction. Tencent launched the industrial-grade Hunyuan Game content production engine, offering developers text-to-image and image-to-video models that significantly improve the production efficiency of game art assets.⁹⁷ NetEase's game Justice introduced Shen Qiusuo, an intelligent non-player character powered by DeepSeek. Described as the game's first virtual character with emotions, thoughts, personal development and a story, the character enhanced players' interactive experience.⁹⁸

Office assistants

Through natural-language understanding and dynamic content generation, generative AI upgrades conventional software tools into intelligent assistants with cognitive and decision-support capabilities. It substantially reduces repetitive work in document processing, code generation and data analysis, increasing the intelligence of office applications.

In document processing, generative AI has become deeply integrated into office software, significantly improving efficiency. Kingsoft Office released WPS AI, offering content creation, intelligent assistance and knowledge insights. It also introduced an enterprise solution supporting fully private deployment.

In code generation, generative AI is having an increasing effect on software development. Large models can understand natural-language descriptions or code fragments supplied by users and automatically generate functional code with appropriate syntax and logic. In the first half of the year, companies including Baidu, ByteDance and Meituan released automated programming tools based on generative AI. Users can generate complete functional code simply by describing their requirements in natural language.

Intelligent hardware

Combining generative AI's multimodal capabilities with hardware significantly improves the ability of wearables, smart-home devices, robots and other products to perform complex tasks.

In March 2025, the General Office of the Communist Party of China Central Committee and the General Office of the State Council issued the Special Action Plan to Boost Consumption. It called for the AI Plus initiative to promote AI-enabled consumption, accelerate the development and adoption of technologies and products such as autonomous driving, smart wearables and robots, and open up new consumer markets with high growth potential.

Central ministries and local governments also worked together to develop 11 national pilot zones for innovative AI applications. They jointly established manufacturing innovation centres for embodied intelligent robots, humanoid robots and related fields, supporting industrial clustering. Embodied robots featured in the YangBOT performance at CCTV's 2025 Spring Festival Gala, bringing the technology to a mass audience and attracting widespread public attention.

Scientific research

Scientific large models trained with generative AI on research information and experimental data can assist researchers with literature analysis and data mining. They can process large volumes of specialist literature, helping researchers understand developments at the forefront of a field, extract key information and identify potential research directions.

In experimental design and optimisation, such models can draw on existing knowledge and data to suggest experimental designs and even simulate experiments, helping optimise parameters and improve efficiency.

In March, the South China Sea Institute of Oceanology of the Chinese Academy of Sciences released version 1.0 of Yaohua, a multimodal coral-reef model. By analysing more than 100,000 underwater images, it achieved 88% accuracy in identifying coral genera and species and was tens of times more efficient than manual analysis, marking a technological advance in intelligent, efficient analysis of coral-reef survey data.⁹⁹

In April, the National Astronomical Observatories released Jinwu, a solar large model. It can understand and answer questions about solar physics and recognise

and analyse solar images, enabling accurate predictions of solar-flare activity.¹⁰⁰

Notes and sources

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⁸⁵ Ministry of Industry and Information Technology,
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⁸⁷ Government of China website, https://www.gov.cn/yaowen/shipin/202504/content_7021303.htm, 27 April 2025.

⁸⁸ Government of China website, https://www.gov.cn/lianbo/bumen/202504/content_7020920.htm, 25 April 2025.

⁸⁹ Government of China website, https://www.gov.cn/yaowen/shipin/202504/content_7021303.htm, 27 April 2025.

⁹⁰ EFLOPS means exaflops, or 10^{18} floating-point operations per second.

⁹¹ Government of China website, https://www.gov.cn/lianbo/bumen/202505/content_7025580.htm, 28 May 2025.

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⁹⁴ Compiled and estimated by CNNIC from publicly disclosed online information on investment and financing transactions, excluding private placements, initial public offerings, delistings and similar events.

⁹⁵ Same source as note 94.

⁹⁶ Baidu first-quarter 2025 earnings conference call, <https://ir.baidu.com/events/event-details/q1-2025-baidu-earnings-conference-call>, 21 May 2025.

⁹⁷ Tencent, <https://hunyuan.tencent.com/hunyuan-game>, 20 May 2025.

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