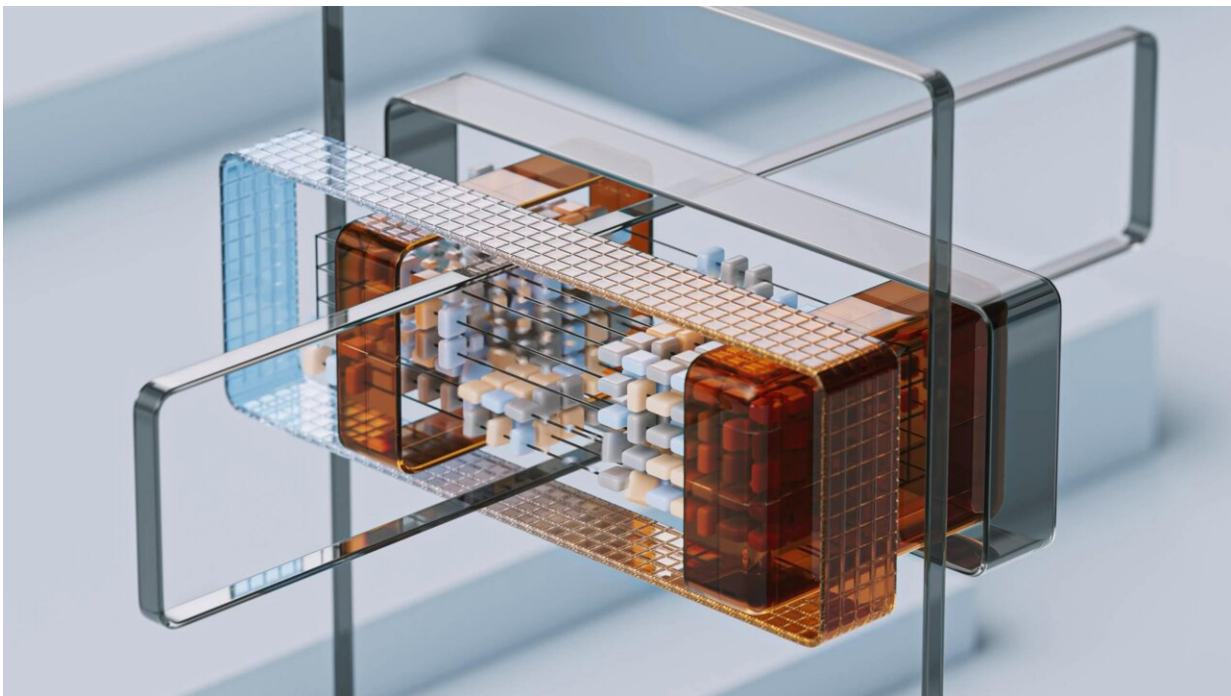# China leading surge in generative AI patents: UN

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Credit: Google DeepMind from Pexels

The number of international patent filings for innovations using cutting-edge generative artificial intelligence have surged eightfold in six years, the UN said Wednesday, the majority from China-based innovators.

A total of 54,000 patents were filed for generative AI innovations in the decade leading to 2023, the United Nations' World Intellectual Property

Organization said in a fresh report.

A full 25 percent of those were filed in the last year alone, WIPO said.

So-called GenAI, in which trained [computer programs](#) create everything from text and videos to music and computer code in seconds on simple prompts, "has emerged as a game-changing technology", said WIPO chief Daren Tang.

GenAI patents still only represent six percent of all AI patents globally, but the number of filings is rising fast.

WIPO highlighted that GenAI patents had increased eightfold since 2017, when the deep neural network architecture behind large language models that have become synonymous with AI was first introduced.

'Booming'

"This is a booming area," WIPO's [patent](#) analytics manager Christopher Harrison told reporters in Geneva.

The technology is powering a range of industrial and consumer products, including chatbots like ChatGPT and Google's Gemini.

It can also do things like help design new molecules for [drug development](#) and enable new product design and optimization.

WIPO's report determined that most GenAI patents by far were being filed out of China.

Between 2014 and 2023, more than 38,000 GenAI innovations have come from that country, the report showed.

That was six times more than the United States, in second place on 6,276. South Korea came in third, on 4,155, followed by Japan on 3,409.

India, where 1,350 GenAI patents were filed, meanwhile saw the highest average annual growth rate, at 56 percent, WIPO said.

Most of the top GenAI applicants are Chinese, with Tencent on top, followed by Ping An Insurance, Baidu, and the Chinese Academy of Sciences.

IBM only shows up in fifth place, followed by Alibaba of China, Samsung Electronics of South Korea, and Google's parent company Alphabet, with Chinese company ByteDance and Microsoft taking the final spots on the top 10 list, the WIPO report showed.

Image and [video data](#) dominated the GenAI patent filings, with nearly 18,000 inventions over the decade under review, followed by text, and speech/music with nearly 13,500 inventions each.

WIPO's report also found that GenAI patents using molecule, gene and protein-based data were growing rapidly, with nearly 1,500 inventions since 2014, and an average 78-percent annual growth over the past five years.

'Groundbreaking'

Tang told reporters that WIPO's report aimed to help give "an insight as to what is happening upstream, then we can make a bit more educated guesses as to what's going to happen downstream in the years to come".

He acknowledged the fears surrounding the technology, including the potential for massive job losses, disrupt industries and flout intellectual property protections.

If the GenAI "undermines human creativity and ... prevents a human creator from earning a living, I think that's going to be something that we really need to watch out for", he said.

In particular, he stressed the importance of IP protections for protecting creative expression, insisting they could not be flouted by those training AI models.

He voiced hope that "there will be some form of settlement or arrangement between the companies that are training the models and the companies or the creators who are creating the content".

Such groundbreaking technology, he insisted, must keep human beings "at the center of the innovation ecosystem... enhancing and enabling human-based innovation, not destroying it".

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