**What’s different about generative A.I.?**

Artificial intelligence is what economists call a general-purpose technology, or GPT—one that has applications across industries and the potential to transform the broad economy. (The GPT in ChatGPT, on the other hand, stands for generative pretrained transformer.) And while generative A.I. such as the chatbots and image-creation tools produced by OpenAI, Google, and others has refocused public attention, the technology is, of course, hardly new. One-quarter of US companies have already adopted some form of A.I., while Chinese and Indian companies are at nearly 60 percent, according to a 2022 IBM report. A.I. has made inroads in tech, manufacturing, healthcare, banking and financial services, media, [retail](https://www.chicagobooth.edu/review/when-retail-buyers-panic-ai-keeps-calm), hospitality, and automaking.

Some A.I. applications—say, the Netflix algorithm that recommends programs on the basis of pattern recognition in viewing habits, or the tech for self-driving cars—focus on performing repetitive or specific tasks.

Generative A.I. tools, on the other hand, can identify patterns in massive data sets to create new content, including text, audio, and images. A chatbot used for customer-service purposes cannot, say, craft a movie script based on a human prompt. Generative A.I. programs could do this, along with producing what appear to be novel solutions to complex challenges.

Hence the consternation of the screenwriters, as well as white-collar workers in a slew of professions previously considered untouchable by automation.

“It was once a common belief that computers could not take over creative jobs, such as journalism or graphic design,” says Chicago Booth’s [Anders Humlum](https://www.chicagobooth.edu/review/authors-experts/h/anders-humlum). “However, with the advent of large language models and generative A.I., we’ve seen technologies . . . now automating tasks traditionally done by journalists, graphic designers, or programmers.”

Experts do not all agree on what does and does not constitute generative A.I., but some regard it as being a step toward artificial general intelligence—that is, a technology that is able to operate in a fully human way, perform cognitive tasks just like a person, and ultimately exceed all human capabilities. A group of researchers from Microsoft (a key investor in OpenAI), examining OpenAI’s GPT-4 model in an April 2023 study, finds that it “attains a form of *general* intelligence, indeed showing *sparks of artificial general intelligence*,” although they acknowledge “a lot remains to be done to create a system that could qualify as a complete AGI.”