## Microsoft to Invest \$10 Billion in OpenAl, the Creator of ChatGPT

The tech giant aims to remain at the forefront of generative artificial intelligence with its partnership with OpenAI.

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Microsoft has extended its partnership with OpenAI, the artificial-intelligence lab behind the chatbot ChatGPT. Jovelle Tamayo for The New York Times

## By Cade Metz and Karen Weise

Cade Metz and Karen Weise reported this article from San Francisco and Seattle.

Microsoft said on Monday that it was making a "multiyear, multibillion-dollar" investment in OpenAI, the San Francisco artificial intelligence lab behind the

experimental online chatbot ChatGPT.

The companies did not disclose the specific financial terms of the deal, but a person familiar with the matter said Microsoft <u>would invest \$10 billion</u> in OpenAI.

Microsoft had already invested more than \$3 billion in OpenAI, and the new deal is a clear indication of the importance of OpenAI's technology to the future of Microsoft and its competition with other big tech companies like Google, Meta and Apple.

With Microsoft's deep pockets and OpenAI's cutting-edge artificial intelligence, the companies hope to remain at the forefront of generative artificial intelligence — technologies that can generate text, images and other media in response to short prompts. After its surprise release at the end of November, ChatGPT — a chatbot that answers questions in clear, well-punctuated prose — became the symbol of a new and more powerful wave of A.I.

The fruit of more than a decade of research inside companies like OpenAI, Google and Meta, these technologies are poised to remake everything from online search engines like Google Search and Microsoft Bing to photo and graphics editors like Photoshop.

The deal follows Microsoft's announcement last week that it had begun laying off employees as part of an effort to <u>cull 10,000 positions</u>. The changes, including severance, ending leases and what it called "changes to our hardware portfolio" would cost \$1.2 billion, it said.

Satya Nadella, the company's chief executive, said last week that the cuts would let the company refocus on priorities such as artificial intelligence, which he called "the next major wave of computing."

Mr. Nadella made clear in his company's announcement on Monday that the next phase of the partnership with OpenAI would focus on bringing tools to the market, saying that "developers and organizations across industries will have access to the best A.I. infrastructure, models and tool chain."

OpenAI was created in 2015 by small group of entrepreneurs and artificial intelligence researchers, including Sam Altman, head of the start-up builder Y Combinator; Elon Musk, the billionaire chief executive of the electric carmaker Tesla; and Ilya Sutskever, one of the most important researchers of the past decade.

They founded the lab as a nonprofit organization. But after Mr. Musk left the venture in 2018, Mr. Altman remade OpenAl as a for-profit company so it could raise the money needed for its research.

Satya Nadella, chief executive of Microsoft, said the next phase of the partnership with OpenAl would focus on bringing tools to the market. Yonhap/EPA, via Shutterstock

A year later, Microsoft <u>invested a billion dollars in the company</u>; over the next few years, it <u>quietly invested another \$2 billion</u>. These funds paid for the enormous amounts of computing power needed to build the kind of generative A.I. technologies OpenAI is known for.

OpenAI is also in talks to complete a deal in which it would sell existing shares in a so-called tender offer. This could total \$300 million, depending on how many employees agree to sell their stock, according to two people with knowledge of the discussions, and would value the company at around \$29 billion.

In 2020, OpenAI built <u>a milestone A.I. system, GPT-3</u>, which could generate text on its own, including tweets, blog posts, news articles and even computer code. Last year, it unveiled <u>DALL-E</u>, which lets anyone generate

photorealistic images simply by describing what he or she wants to see.

Based on the same technology as GPT-3, ChatGPT showed the general public just how powerful this kind of technology could be. More than a million people tested the chatbot during its first few days online, using it to answer trivia questions, explain ideas and generate everything from poetry to term papers.

Microsoft has already incorporated GPT-3, DALL-E and other OpenAI technologies into its products. Most notably, GitHub, a popular online service for programmers owned by Microsoft, offers Copilot, a tool that <u>can</u> <u>automatically generate snippets of computer code</u>.

Last week, it expanded availability of several OpenAI services to customers of Microsoft's Azure cloud computing offering, and said ChatGPT would be "coming soon."

The company said it planned to report its latest quarterly results on Tuesday, and investors expect the difficult economy, including declining personal computer sales and more cautious business spending, to further hit revenues.

Microsoft has faced slowing growth since late summer, and Wall Street analysts expect the new financial results to show its slowest growth since 2016. But the business still produces substantial profits and cash. It has continued to <u>return money to investors</u> through quarterly dividends and a \$60 billion share buyback program authorized by its board in 2021.

Both Microsoft and OpenAI say their goals are even higher than a better chatbot or programming assistant.

OpenAl's stated mission was to build artificial general intelligence, or A.G.I., a

machine that can do anything the human brain can do. When OpenAl announced its initial deal with Microsoft in 2019, Mr. Nadella described it as the kind of lofty goal that a company like Microsoft should pursue, comparing A.G.I. to the company's efforts to build a quantum computer, a machine that would be exponentially faster than today's machines.

"Whether it's our pursuit of quantum computing or it's a pursuit of A.G.I., I think you need these high-ambition North Stars," he said.

That is not something that researchers necessarily know how to build. But many believe that systems like ChatGPT are a path to this lofty goal.

In the near term, these technologies are a way for Microsoft to expand its business, bolster revenue and compete with the likes of Google and Meta, which are also addressing A.I. advancements with a sense of urgency.

Sunda Pichai, the chief executive of Google's parent company, Alphabet, recently declared a "code red," upending plans and jump-starting A.I. development. Google intends to unveil more than 20 products and demonstrate a version of its search engine with chatbot features this year, according to a slide presentation reviewed by The New York Times and two people with knowledge of the plans, who were not authorized to discuss them.

But the new A.I. technologies come with a long list of flaws. They often produce toxic content, including <u>misinformation</u>, hate speech and images that are biased against women and people of color.

Microsoft, Google, Meta and other companies have been reluctant to release many of these technologies because they could damage their established brands. Five years ago, Microsoft released a chatbot called Tay, which generated racist and xenophobic language, and quickly removed it from the internet after complaints from users.

Nico Grant contributed reporting.