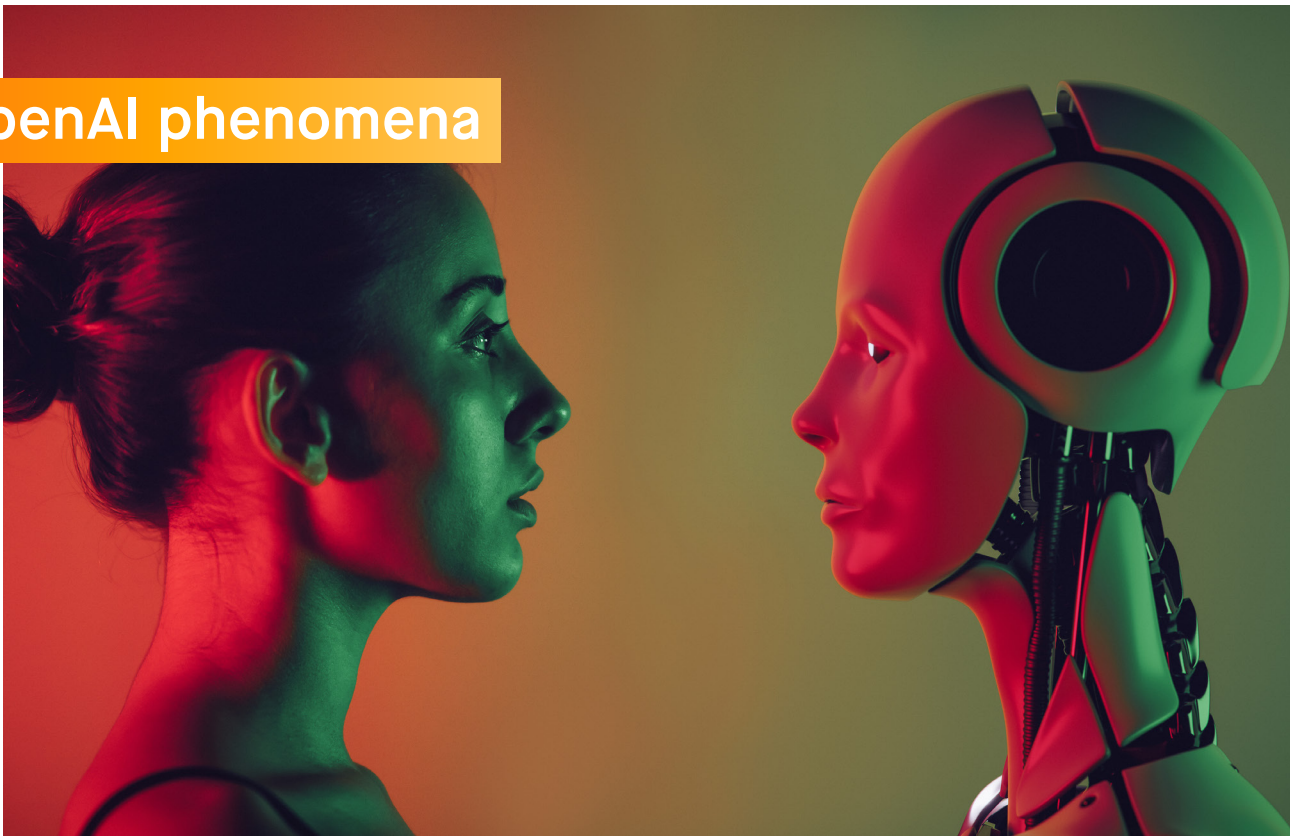


The OpenAI phenomena

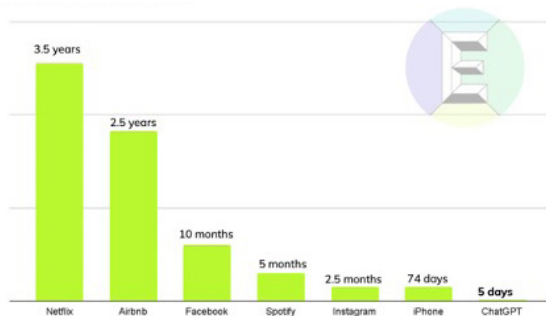


The artificial intelligence lab that developed ChatGPT is now valued at \$29 billion. How does OpenAI generate revenue? What is its business model?

Charles-Henry Monchau *Chief Investment Officer*

ChatGPT is the technological attraction of the beginning of this year. Available to the general public for two months, this chatbot - or conversational robot - has passed the million user mark in just 5 days. A record adoption curve, when you know that it took 74 days to the iPhone and 10 months to Facebook to do the same...

Time to 1 million users



Source: Exceptional view via Linas Beliunas

ChatGPT was developed by OpenAI, a startup founded in San Francisco in late 2015 by Sam Altman (its current CEO), Elon Musk and other artificial intelligence enthusiasts. Musk resigned from the board in February 2018 but remained a donor. In 2019, OpenAI LP received a \$1 billion investment from Microsoft (with whom it has since had a strategic partnership) and Matthew Brown Companies.

Launched in November 2022, the GPT3 version of the ChatGPT project is capable - in record time - of the following tasks:

- Generate text (human language) for a variety of purposes, such as creating chatbots and content, in many foreign languages.
- Answer questions: ChatGPT can be trained to understand and answer questions, making it suitable for use in applications such as customer service chatbots or information retrieval systems. ChatGPT can write a movie script, develop a diet or sports training plan, write a description of a new job opening, and more. The chatbot can even develop an investment strategy for 2023...
- Classify texts: ChatGPT can be used to classify texts into different categories, such as spam or non-spam, or to interpret the general sentiment of a text (e.g. positive, negative, neutral).
- Write summaries even on the basis of relatively long texts, which makes it useful for tasks such as summarizing press articles or research papers.
- Generate dialogue systems: it can be used to create sophisticated chatbots capable of conducting intelligent conversations with users.
- Translate text from one language to another, making it useful for tasks such as translation applications or website localization.

ChatGPT is so effective that it has just been banned for all students in the State of New York.

Even more impressive, especially to developers, is that the chatbot is able to create entire chunks of code in a multitude

of programming languages, but also identify bugs and propose solutions to rectify them.

ChatGPT is able to achieve these feats thanks to an artificial intelligence that uses a sum of information already acquired, based on 175 billion parameters and declined in different initiatives such as Dall-E for image generation from text (see example below), Whisper (automatic language recognition) and ChatGPT for the chatbot.

Mural image with DALL-E 2 by David Schnurr



If the release of this chatbot became so viral, it is mainly because it has been made available to the general public, which has thus taken the measure of its revolutionary character. Many specialists dare to talk about a real "game changer", i.e. a technology that can radically change our daily life but also disrupt a large number of industries.

Won't artists, writers, teachers and programmers have to reinvent themselves if each of us can effortlessly generate art, articles, texts and programming scripts?

Although it is already incredibly powerful, the widespread use of OpenAI's services could spur many innovations in the near future.

However, the fact that this revolutionary digital assistant is free - even if it still has some flaws - raises many questions.

What is ChatGPT's business model? How do they generate revenue?

OpenAI has the potential to become a huge commercial success

Based in San Francisco, OpenAI is an artificial intelligence (AI) research lab that currently employs more than 300 people, including many highly skilled researchers. Although the parent company is a non-profit, OpenAI has become progressively less altruistic as it also has a for-profit company with profits capped at a maximum of 100 times the initial investment.

The transition to a "for-profit" status appears to be driven both by the need to access venture capital and the need to attract and retain top talent, including leading researchers from prestigious universities and companies (the best of whom can earn more than \$1 million per year).

Until now, OpenAI has been able to meet its expenses thanks to the capital injection from the initial investors but also thanks to the revenues generated by a "freemium" offer. For example, users of Dall-E (OpenAI's artificial intelligence

program capable of creating images from text descriptions) get a certain number of tokens for free, and must purchase more to generate new images.

ChatGPT is free to use for now - still being in its research phase - but OpenAI's CEO has already indicated that free use is impossible to preserve.

As mentioned above, OpenAI offers a significant amount of functionality to individuals and businesses (content creation, translation, coding, etc.). While they are currently free, the opportunities to monetize these features are very significant. Important licensing fees can be set up to "monetize" the research efforts undertaken so far.

After partnering with Microsoft, OpenAI has announced its intention to license its software commercially, with the Redmond giants being their preferred partner in this endeavor (the rights to the GPT-3 model - the basis of ChatGPT - are owned exclusively by Microsoft).

But a major source of revenue could come from the premium version of ChatGPT, 'ChatGPT Professional', which has higher limits and faster performance.

This version - which was just announced - includes no "blackout" windows (i.e. unavailability) and unlimited messages with ChatGPT - "at least 2x the normal daily limit."

Access to "ChatGPT Professional" is already subject to a waiting list, which is a testament to the immense interest in this chatbot. While the figure of one million users in the first 5 days has been confirmed, the actual number of users remains unknown.

By 2024, what could be the number of paying users? Thanks to the viral marketing implemented since its launch, ChatGPT could quickly reach the threshold of 100 million paying users. Or even much more. By comparison, Spotify has 195 million premium subscribers and Netflix some 250 million.

Assuming an annual subscription price of \$10 or \$20, this premium service should enable ChatGPT to generate several billion dollars in revenue in a few years.

The partnership with Microsoft could also accelerate revenue growth. If the deal with the software giant is completed (see next section), OpenAI could benefit from huge distribution opportunities through Microsoft. One could very well imagine ChatGPT and Dall-E being integrated into the Microsoft Office package. As a reminder, Microsoft has 1.4 billion users of its products and services worldwide.

OpenAI is probably not currently profitable, but that could change very soon. At a recent investor presentation, OpenAI projected revenues of \$200 million in 2023 and \$1 billion in 2024. Based on these assumptions, OpenAI has the potential to generate very significant profits in the years ahead. By way of comparison, DeepMind, Alphabet's leading artificial intelligence subsidiary, generated about \$1.7 billion in revenue in 2021 and is already profitable.

What is the estimated value of OpenAI?

Microsoft is in talks to invest \$10 billion in OpenAI.

The financing, which would also include other venture capital firms, would value OpenAI at \$29 billion. It's unclear whether the deal has been finalized, but documents sent to potential investors in recent weeks indicate that the deal was expected to close by the end of 2022.

Microsoft's capital infusion would be part of a relatively complex agreement whereby the company would receive 75 percent of OpenAI's profits until it recovers its investment (it's not clear whether OpenAI's investments in Microsoft's cloud business are included in the equation).

Once that threshold is reached, it would revert to a structure that mirrors OpenAI's ownership, with Microsoft holding 49%, other investors 49%, and OpenAI's non-profit parent company 2%. There is also a profit cap that varies for each group of investors, which is unusual for venture capital deals, where investors expect to make 20 or 30 times their stake. The terms and amount of the investment can change, and the deal can fail.

Last week, the Wall Street Journal confirmed that ChatGPT was allowing employees and early investors to sell their shares on a \$29 billion valuation.

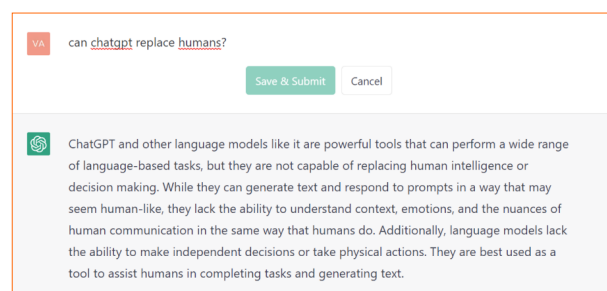
Conclusion

Given the success of the artificial intelligence (AI) services it has launched recently, OpenAI could very soon become a major commercial success. While tech giants are currently struggling, OpenAI has launched several AI-based services that seem very much ahead of their time. For some analysts, OpenAI even has the potential to overshadow some of the GAFAs (Morgan Stanley just published a report explaining how OpenAI could, in the long run, pose a threat to Google's profitability).

The company combines (i) extremely rapid market penetration and (ii) the potential to automate and radically reshape many businesses (and therefore jobs), which suggests relatively significant disruptions in the very near future.

OpenAI may not be profitable yet, but given its recent breakthroughs and strategic alliance with Microsoft, it could be very soon.

And if you want to learn more about ChatGPT (such as whether the chatbot can replace humans), just download the app and ask...



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