

THE CHATGPT PHENOMENON SPARKS THE NEED FOR AI REGULATION

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Since the end of November last year, when its beta version was released for public use, ChatGPT has been dazzling and, in a way, scaring people due to its extraordinary capacity to produce texts, answer questions on practically all subjects and establish conversations with logical reasoning. It is capable of writing texts of a diverse nature, such as poems, chronicles and even song lyrics, in different styles. It can also perform other functions, such as writing computer program codes, writing film scripts, essays, and much more[1].

It reached over 100 million users in January of this year and its subscriber base continues to grow rapidly. The paid subscription (Plus version) was launched in Brazil in early February and the new version – GPT-4 – was released in March[2]. The company that developed ChatGPT was OpenAI[3], an American company specialized in generative artificial intelligence solutions[4].

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ChatGPT is an algorithmic tool that imitates natural language, a type of conversational artificial intelligence, that is, a chatbot that talks and establishes dialogues with the user. But the conversational way in which it interacts with the user is different, as it is not limited to answering questions, being able to admit mistakes, challenge incorrect assumptions and reject inappropriate requests.

It belongs to the family of large language models, which are programs trained on vast sets of textual data to generate natural language, similar to text produced by a human person. Language models are used to understand and answer questions in natural languages[5], such as English, Portuguese, French, Spanish, etc. To generate natural language texts, language models are trained to learn to predict the next word or phrase based on the previous context. They can be used for various tasks such as automatic translation, text generation, automatic summarization[6] and answering questions. Newer language models, such as theGPT-3[7] from OpenAI, are based on deep neural networks[8] and show impressive performance in various language processing tasks.

The launch of ChatGPT gave rise to a race among big tech companies, which rushed projects to advance the development of AI solutions. The first to feel threatened by the news was Google, which, seeing the possibility of losing its long dominance in the internet search industry[9], announced plans to launch its own artificial intelligence tool similar to ChatGPT. At the beginning of February, it presented the chatbot Bard[10], its bet to compete with ChatGPT[11]. Microsoft made a quicker move and strengthened its partnership with the company that

developed ChatGPT, with a multi-billion investment in OpenAI[12], which gave it the primacy of being the first commercial partner to use the chatbot in its products.

Microsoft has announced that it will incorporate ChatGPT into some of its products, such as Word, Powerpoint, Outlook, Teams (its videoconferencing software) and its Azure cloud service. And, soon afterwards, it announced that it would incorporate the ChatGPT mechanism into Bing, its search engine[13], which will now not only provide a list of search results, but will also answer questions, talk to users and will generate content in response to queries made by the public[14] .

Even Elon Musk does not want to be left out of the race to put natural language tools on the market and announced that he is forming a team with specialists in artificial intelligence, to set up his own research laboratory and to face ChatGPT[15]. The competition is not limited to technology companies, extending to governments of different countries. In late February, China released its AI-based conversational chatbot, dubbed Moss, for public testing. Moss was developed by a team of scientists at Fudan University in Shanghai[16].

This type of technology has placed generative artificial intelligence[17] at the center of the debate, due to its impacts on people's rights and security, causing scientists and politicians to raise the tone of demands for AI regulation.

The potential benefits of AI in society are manifold. AI-based programs can contribute to reducing

pollution, reducing the number of accidents and deaths in city traffic, revolutionizing medicine and creating new health care procedures and treatments, improving education and helping to fight crime and terrorism. AI technologies have the potential to increase productivity in all sectors of the economy, create new markets and bring opportunities for economic growth. Despite the countless and fantastic benefits that technology can bring to humanity, its use is also accompanied by certain risks, as it has the potential to expose people to design errors and security flaws, undermining fundamental rights and guarantees of individuals.

Specifically with regard to generative language models, the risks are that they will further increase disinformation, the process of spreading fake news that has threatened democratic governments. The large algorithmic models of natural language will make it even easier to produce thousands of fake news, with different versions of the same fact. By creating fake profiles on digital platforms, it will be easier to influence people to make the wrong decisions. This is the opinion, for example, of Professor Pattie Maes, an expert in artificial intelligence at the prestigious MIT (Massachusetts Institute of Technology). Emphasizing that the current situation of lack of informational control is already harmful, she warns that "this technology will further degrade this scenario, because the internet will be flooded with much more garbage disguised as serious, convincing content"[18]. She explains that content produced or recommended by artificial intelligence, by being able to generate well-crafted texts, induces people to be less critical about whether something is true or not.

ChatGPT and large language models in general, since they are trained and collect large amounts of information freely available on telematic networks, also raise concerns with aspects related to privacy and protection of personal data.

The system collects huge amounts of data available on the internet, and can even process sensitive data from people that are hosted on other services and digital platforms. As the exact parameters of its operation are not known, it is not ruled out that ChatGPT is trained not only based on open data but also on data shared by other platforms and digital services. Furthermore, as it is a conversational system, which engages in dialogue using natural language, this can lead to the user providing extremely intimate personal information. Given this characteristic of its operation, the user can often imagine that he is making contact with a human person, and not with an artificial intelligence system. Engaging in a dialogue with ChatGPT, the user can reveal his interests, creeds, sexual and ideological preferences and data related to his health. The chatbot will not only store all the messages received from the user but, as it is a highly sophisticated artificial intelligence system, it will cross-reference these data blocks and extract inferences that will allow it to draw a complete profile of the user's personality.

Another area where ChatGPT raises concerns is related to copyright. For example, what are the implications of a user of a generative artificial intelligence system creating new texts based on previous intellectual work without mentioning or without the necessary credits for the original work? Does the use of the original work, even

parts of it, require authorization from the author? These are legal issues that arise with the emergence and use of these new natural language artificial intelligence systems. The datasets on which the system is trained and from which it extracts results may involve intellectual works protected by copyright.

The implications of these new generative artificial intelligence systems are many, on different areas and aspects of human life, with the potential to affect people's fundamental rights, which reinforces the need to regulate the development and operation of these technologies.

There is a prevailing culture in the corporate environment and also in the United States that the market is the one who should find the best practices and self-regulate. Self-regulatory initiatives aimed at increasing the accuracy of AI products, reducing the risk of biased responses and harming people's fundamental rights, are welcome and should be encouraged. But they are not enough to eliminate the extreme risks that technologies based on artificial intelligence pose to society.

Only governments, with the collaboration of international organizations, will be able to establish legislation that all companies must comply with for the development of products and services that use artificial intelligence. Regulatory intervention by governments, through their parliaments, is even advocated by Sam Altman, the CEO of OpenAI, who created ChatGPT. Altman warns that it won't take long for the world to experience a potentially frightening artificial intelligence[19], and it

is essential to create rules and regulations to prevent technology deviations.

The European Union has already presented, since April 2021, its proposal for the regulation of artificial intelligence (AI) technologies, which was named the *Artificial Intelligence Act* (or simply *AI Act*). MEPs hope to reach a consensus around the *AI Act* this March and try to approve the text in 2023[20]. Brazil is not lagging behind on the issue of regulating artificial intelligence technologies. In December 2022, a commission of jurists chaired by the Minister of the Superior Tribunal of Justice Ricardo Villas Bôas Cueva delivered to the President of the Senate, Senator Rodrigo Pacheco, a report that will support the analysis of the various bills that are being processed in Congress on the subject[21].

The regulation brings legal certainty and favors the companies that develop or are in the process of developing AI tools. With an established regulatory framework, companies have to work within rules, balancing competition and favoring consumers with better products and services. The regulation of artificial intelligence technologies is the only way to deal with the clear challenges that society will face.

[1] To test ChatGPT, go
to: <https://chat.openai.com/auth/login>

[2] Cf. news published on the Olhar Digital website, on 02.13.23, accessible
at: <https://olhardigital.com.br/2023/02/13/internet-e->

[redes-sociais/chatgpt-plus-e-oficialmente-lancado-no -
Brazil/](#)

[3] The OpenAI website: <https://openai.com/>

[4] OpenAI is the company that also developed Dall-E, an application capable of generating images according to the user's preferences and determinations. Both ChatGPT and Dall-E are trained on large amounts of data, available on the Internet. To test the Dall-E, go to: <https://openai.com/product/dall-e-2> .

[5] Natural language is any language naturally developed by human beings, such as Portuguese, French, English, etc.

[6] Language models can be used to automatically summarize long documents or articles , making them more accessible and easier to read.

[7] Generative Pre-Training Transformer 3 (GPT-3) is an autoregressive language model that uses deep learning to produce human-like text. It is the third-generation language prediction model in the GPT-n series (and the successor to GPT-2) created by OpenAI. The full version of GPT-3 is capable of 175 billion machine learning parameters. Introduced in May 2020 and in beta testing in July 2020, this release is part of a trend in natural language processing (NLP) systems of pre-trained language representations. Prior to the release of GPT-3, the largest language model was the Microsoft's Turing NLG, released in February 2020, capable of 17 billion parameters - less than a tenth of GPT-3. (Cf. Wikipedia, <https://pt.wikipedia.org/wiki/GPT-3>).

[8] In computer science, artificial neural networks (ANNs) are computational models inspired by an animal's central nervous system (in particular the brain) that are capable of machine learning (learning from data) as well as pattern recognition . (Cf.

Wikipedia, https://pt.wikipedia.org/wiki/Artificial_neural_rede).

[9] Although Bing has only about 9% of the Internet search market, the integration of the ChatGPT algorithm into Microsoft's search engine could result in changes in the participation of these companies in this sector of the digital economy. The ChatGPT technology is Microsoft's bet to capture a larger part of the market, which is dominated by Google (with its Chrome search engine).

[10] Google had already been developing for about two years a language model for dialog applications, LaMDA, technology that will be incorporated into Bard.

[11] See news published on CNN Brasil, on 06.02.23, accessible at: <https://www.cnnbrasil.com.br/business/google-anuncia-ferramenta-para-concorrer-com-o-chatgpt/#:~:text=%20Google%20revealed%20this%20second,%20%20success%20from%20ChatGPT> .

[12] The announced investment The announced investment was 10 billion dollars.

[13] See news published on CNN Brasil, on 07.02.23, accessible at: <https://www.cnnbrasil.com.br/business/microsoft->

[anuncia-novo-bing-com-tecnologia-de-ia-em-partnership-with-owner-of-chatgpt/](#)

[14] These models can increase the accuracy of user search responses, transforming search engines. Instead of receiving a series of links as a result - some sponsored -, they can get answers faster and more accurately.

[15] See news published on CNN Brasil, on 03.03.23, accessible at: <https://www.cnnbrasil.com.br/tecnologia/apos-critica-elon-musk-quer-montar-equipe-para-criar-chatgpt-rival-says-portal/>

[16] See news published on the Gizmochina website, on 21.02.23, accessible at: <https://www.gizmochina.com/2023/02/21/china-chatgpt-rival-moss-chatbot/>

[17] Generative AI allows simpler and faster solutions to be found by the algorithm itself, not requiring the programmer to create all the operating details in relation to the inputs and outputs of the algorithm. It can be said that generative artificial intelligence is an algorithm capable of learning without any human supervision through texts, audios, images, videos and data in general and through this database create new content in different formats. Therefore, it has the ability to create new content, whether in audio, code, images, texts, simulations or videos. Through automatic learning, the algorithm generates content for different types of use, combining different databases.

[18] In an interview given to Folha de S.Paulo and published in the edition of 03.04.23. Accessible at: <https://www1.folha.uol.com.br/tec/2023/02/inteligencia-artificial-e-como-um-papagaio-e-isso-traz-riscos-diz-especialista-do-mit.shtml>

[19] See news published in Época Negócios, on 20.02.23, accessible at: <https://epocanegocios.globo.com/tecnologia/noticia/2023/02/a-inteligencia-artificial-esta-a-um-passo-from-becoming-scary-says-sam-altman-creator-of-chatgpt.ghtml>

[20] To learn more about the Artificial Intelligence Act, we suggest reading our article “The regulatory proposal of the European Union for artificial intelligence (1st. part): the hierarchy of risks”, published on the website Jus, on 27.05.21, Accessible at: <https://jus.com.br/artigos/90816/a-proposta-regulatoria-da-uniao-europeia-para-a-inteligencia-artificial-1-parte-a-hierarquizacao-dos-riscos>

[21] See news on the Senate website, published on 05.12.22, accessible at: <https://www12.senado.leg.br/noticias/materias/2022/12/05/inteligencia-artificial-comissao-de-juristas-delivery-report-this-tuesday>