CHAT GPT AND ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION

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INTRODUCTION

This Quick Start Guide introduces Chat GPT, an Artificial Intelligence (AI) tool that has taken the world by storm, reaching 100 million users just two months after being launched. The Quick Start Guide provides an overview of how Chat GPT works and explains how it can be used in higher education. The Quick Start Guide raises some of the main challenges and ethical implications of AI in higher education and offers practical steps that higher education institutions can take.

This Quick Start Guide was published in April 2023. Artificial Intelligence (AI) is a rapidly developing field. This guide is based on GPT-3.5, the latest free version of Chat GPT available at the time of writing. As well as dynamic changes in technology, the ethical implications of Chat GPT and other forms of AI are also swiftly advancing. Readers are advised to constantly check reliable sources for the latest.

What is Chat GPT?

Chat GPT is a language model that allows people to interact with a computer in a more natural and conversational way. GPT stands for "Generative Pre-trained Transformer" and is the name given to a family of natural language models developed by open Artificial Intelligence (AI). This is also known as a form of generative AI because of its ability to produce original results.

Chat GPT uses natural language processing to learn from Internet data, providing users with artificial intelligence-based written answers to questions or prompts. These models are trained on large text data sets to learn to predict the next word in a sentence and, from that, generate coherent and compelling human-like output in response to a question or statement. In the case of Chat GPT, 570 gb of data representing 300 billion words have been supplied to the system and it has around 175 billion parameters. We can think about Chat GPT as a "computer robot" with whom you can talk about anything.

This is helped by its user-friendly interface. Chat GPT can be asked for data, analysis and even an opinion. However, the algorithm by which it works does not take a definite position, as its interpretation is based on the statistical analysis of billions of texts on the Internet.

This Quick Start Guide is based on GPT-3.5, the latest free version of Chat GPT available at the time of writing. Subsequent versions are expected to have more functionality including the capacity to interpret different types of data and with more advanced writing abilities.

Get started with Chat GPT This step-by-step guide

Create an account

1. In any internet browser, go to: https://chat.openai.com/

2. Create an account:

a. Enter your email address or connect a Google or Microsoft account.

b. Create a password (at least 8 characters).

c. Check the email address for an email from Open AI and click to verify your email address.

d. Enter your first and last name and date of birth.

e. Enter your phone number.

f. Enter the verification code that you receive by text message.

Note that Chat GPT is not currently available in all countries.

ARTIFICIAL INTELLIGENCE

Chat GPT is based on machine learning, which is currently the most popular technique in Artificial Intelligence (AI) technology. This section summarizes the different types of AI. One way to understand AI is by classifying it by capabilities: Artificial Narrow Intelligence (ANI) and Artificial General Intelligence (AGI). ANI, or weak AI, is the type of AI that has been achieved so far. AGI, if ever reached, would be comparable to human intelligence. ANI has two main functionalities: reactive machines and limited memory. Reactive machines are the primary type of AI that store memories or experiences. They solely react to a current scenario as they are taught one thing or task and are rarely applied to other scenarios. The most famous example of are active machine is IBM's Deep Blue computer, which was able to play chess and beat international grandmaster Garry Kasparov. Limited memory stores information for a short time and reacts to it. For example, autonomous vehicles or self-driving cars use the information of their surroundings and automatically make decisions such as stop or turn. Machine learning is the currently the most popular technique of ANI and has seen significant progress in recent years. Rather than being programmed with rules to produce answers, computers receive data and the answers expected from the data and, as a result, produce rules by identifying patterns between the two. Chat GPT is based on machine learning. Other techniques of ANI include symbolic logic (also called inference engines or if-then models), expert systems, and knowledge graphs. Symbolic logic is most typically applied in chat bots, which determine the nature of a user's problem through a series of closed questions, from where the chat bot may refer users to a human agent. Knowledge graphs are ways to connect and explain different concepts/data that are not based on machine learning.

CHALLENGES AND ETHICAL IMPLICATIONS

The impact of Chat GPT on higher education has been immediate and divisive. Although its applications in higher education are extensive, many universities have already banned it over fears of student plagiarism, and several countries have blocked Chat GPT. This section distils the main challenges and ethical implications of Chat GPT in higher education.

LACK OF REGULATION

Chat GPT is not currently regulated, a concern addressed by the UNESCO Recommendation on the Ethics of AI (see next section). The extremely rapid development of Chat GPT has caused apprehension for many, leading a group of over 1,000 academics and private sector leaders to publish an open letter calling for a pause on the development of training powerful AI systems. This cessation would allow time for potential risks to be investigated and better understood and for shared protocols to be developed. Privacy concerns in April 2023, Italy became the first country to block Chat GPT due to privacy related concerns. The country's data protection authority said that there was no legal basis for the collection and storage of

personal data used to train Chat GPT. The authority also raised ethical concerns around the tool's inability to determine a user's age, meaning minors may be exposed to age-inappropriate responses. This example highlights wider issues relating to what data is being collected, by whom, and how it is applied in AI. Cognitive biasIt is important to note that Chat GPT is not governed by ethical principles and cannot distinguish between right and wrong, true and false. This tool only collects information from the data bases and texts it processes on the internet, so it also learns any cognitive bias found in that information. It is therefore essential to critically analyze the results it provides and compare them with other sources of information. Gender and diversity Concerns about gender and other forms of discrimination are not unique to Chat GPT but to all forms of AI. On the one hand, reflects the lack of female participation in subjects related to AI and in research/development on AI and on the other hand, the power of generative AI to produce and disseminate content that discriminates or rein forces gendered and other stereotypes.

ACADEMIC INTEGRITY

The main concern that has been expressed about Chat GPT in higher education relates to academic integrity. HEIs and educators have sounded alarm bells about the increased risk of plagiarism and cheating if students use Chat GPT to prepare or write essays and exams. This may have deeper implications for subjects that rely more on written inputs or information re call, areas that Chat GPT can better support. There are also concerns that existing tools to detect plagiarism may not be effective in the face of writing done by Chat GPT. This has already led to the development of other applications that can detect whether AI has been used in writing. In the meantime, multiple HEIs around the world have banned Chat GPT due to concerns around academic integrity and others have updated or changed the way they do assessments, basing them instead on in-class or non-written assignments.

PRIVACY CONCERNS

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COGNITIVE BIAS

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ACCESSIBILITY

There are two main concerns around the accessibility of Chat GPT. The first is the lack of availability of the tool in some countries due to government regulations, censorship, or other restrictions on the internet. The second concern relates to broader issues of access and equity in terms of the uneven distribution of internet availability, cost and speed.

In connection, teaching and research/development on AI has also not been evenly spread around the world, with some regions far less likely to have been able to develop Knowledge or resources on this topic.

COMMERCIALIZATION

Chat GPT was created by a private company, Open AI. Whilst the company has pledged to maintain a free version of Chat GPT, it has launched a subscription option (currentlyUS$20/month) that offers greater reliability and faster access to new versions of the tool. The involvement of private entities in higher education is not new and calls for care and regulation if selecting AI and other tools that are run by companies dependent on making profit, may not be open source (and therefore more equitable and available), and which may be extracting data for commercial purposes.

CONCLUSION

The world needs stronger ethical rules for artificial intelligence. This is the challenge of the hour. UNESCO recommendation on the ethics of artificial intelligence sets the appropriate normative framework member states all endorsed these recommendations. This is the high time to implement the strategies and regulations at national level we have to walk the talk and ensure we deliver on recommendation objectives.

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