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AI-powered chatbot: ChatGPT

CPS 412: Social Issues,
Ethics and
Professionalism

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Introduction

Launched on November 30th, 2022. ChatGPT is an Open AI developed large language model that was programmed by the Elon-Musk founded research institute Open AI. Its basic structure is based on the generative pre-trained transformer (GPT). (Wikipedia, 2023)

Its main function is to understand and mimic how humans converse over text, however ChatGPT can be used for many versatile tasks like debugging computer programs, summarising essays, answering questions, playing basic games and various others. (Wikipedia, 2023)

ChatGPT is an improved and refined version of its predecessor InstructGPT. The main difference between both is that ChatGPT produces comparatively safer answers that aren't deceitful in nature. (Fedus, 2023) It was developed similarly using reinforcement learning from human feedback (RLHF). (MIT technology review, 2023)

Findings from data collected from the survey:

- 1) The survey we conducted raised 106 responses in total.
- 2) The survey data showed that:
 - Age category: 90.6% of the people belonged to the 18-23 category, 8.5% belonged to 24-30 and 0.6% to above 30.
 - Gender: 59.4% of the people identified as male, 37.7% as female, 1.9% as non-binary and 0.9% preferred not to respond.
 - Field of Study: 43.4% of the people belonged to the faculty of science, 29.2% in business, 13.2% in engineering, 4.7% in arts, 3.8% in medical, and 5.7% in others.
 - Continent: 86.8% of responses were from Asia, 10.4% were from North America and 2.8% from others.
 - Level of Study: 76.4% of responses were from undergraduates, 15.1% from diploma students, 5.7% from masters' students, and 2.8% from Ph. D students.
- 3) Approximately 72% of the people have used ChatGPT at least once.

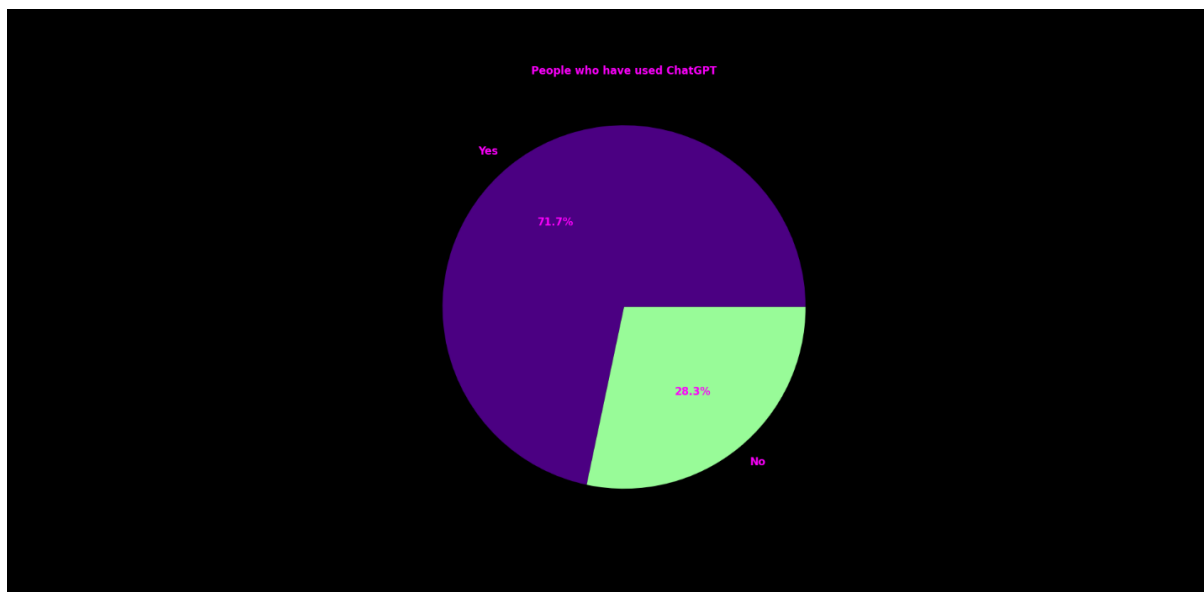


Figure 1: How many people have used ChatGPT?

- 4) After observing the data, it is visible, that a wide majority of the people use ChatGPT weekly, as a tool for aid in their assignments, and self-study. The number of people using ChatGPT for exploring its concept is approximately same as number of people using it as a tool for self-study.

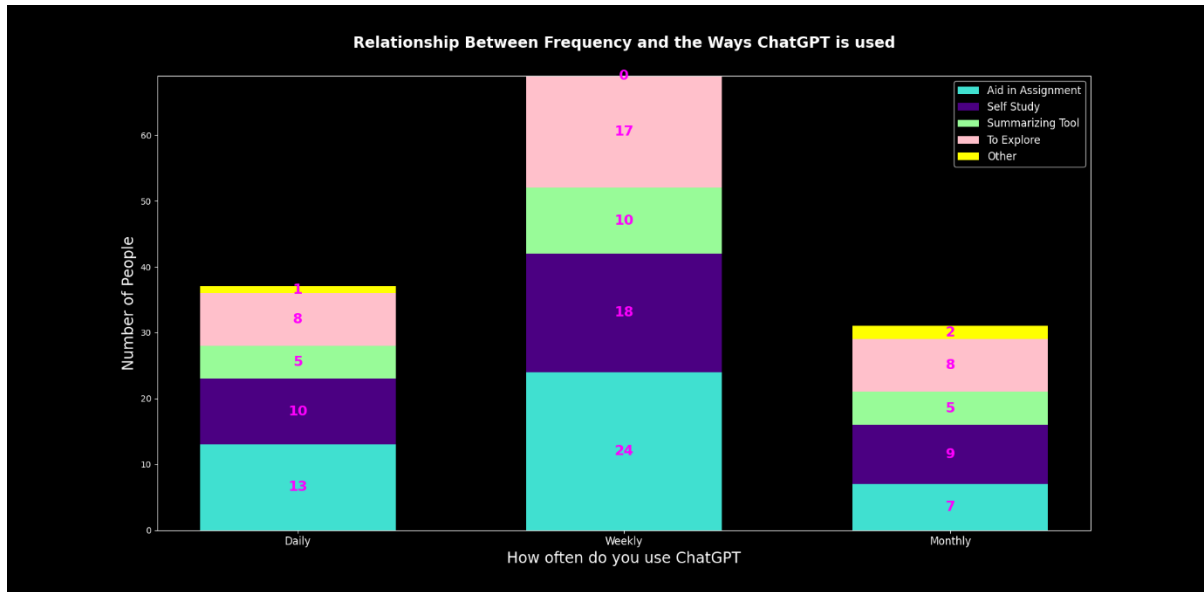


Figure 2: Relationship Between Frequency and the ways ChatGPT is used.

5) At first glance, we can see that throughout all the bars, ‘Positive Impact’ which is highlighted in blue has taken the largest share in each bar, which indicates that regardless of whether the use of ChatGPT is plagiarism or not, in the long run it will prove to be a positive impact on education as a whole.



Figure 3: Relationship Between Plagiarism and the impact on the long run

6) Coming to the question of ChatGPT’s reliability, across various fields of study people find the answers provided by ChatGPT to be quite reliable. Taking average of the responses, on a scale of 0-5, people find the reliability of ChatGPT to lie around 3.618. So, ChatGPT’s reliability should be considered midfield at

this point of its development. Another observation collected was that among all fields of study, Faculty of Science found ChatGPT to be most reliable whereas Faculty of Arts found it least reliable.

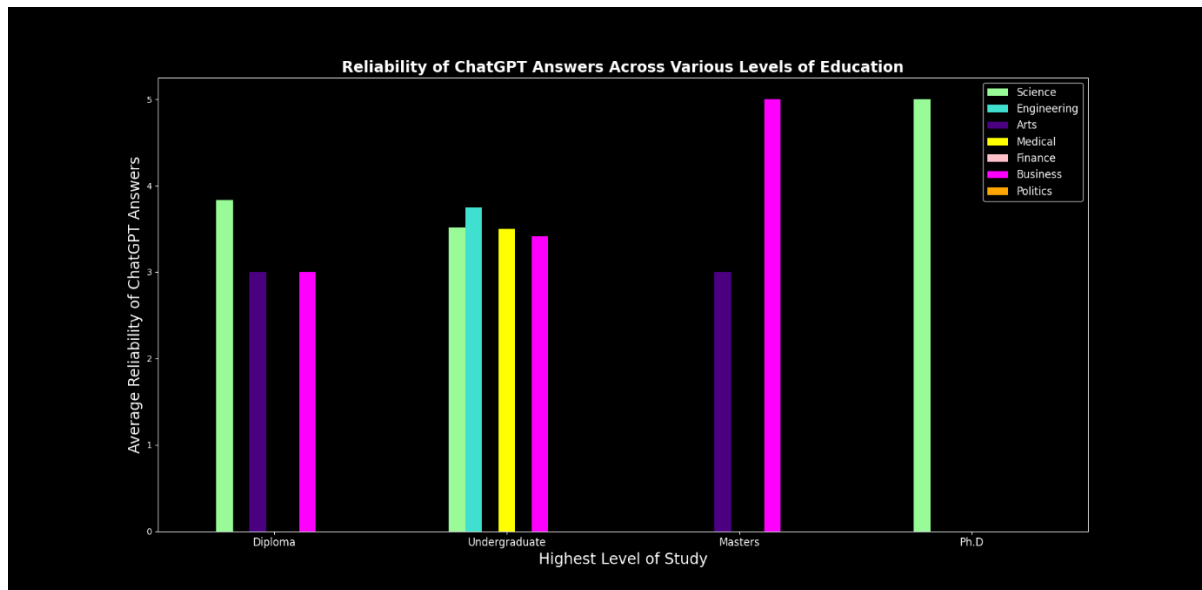


Figure 4: Reliability of ChatGPT Answers Across Various Levels of Education

7) A relationship that can be seen in this graph is that the people who have voted against university adaptation of ChatGPT are more inclined to the possibility of a negative impact on the long run. While people who have voted for university adaptation were under the impression that ChatGPT will bring a positive impact to education in the long run

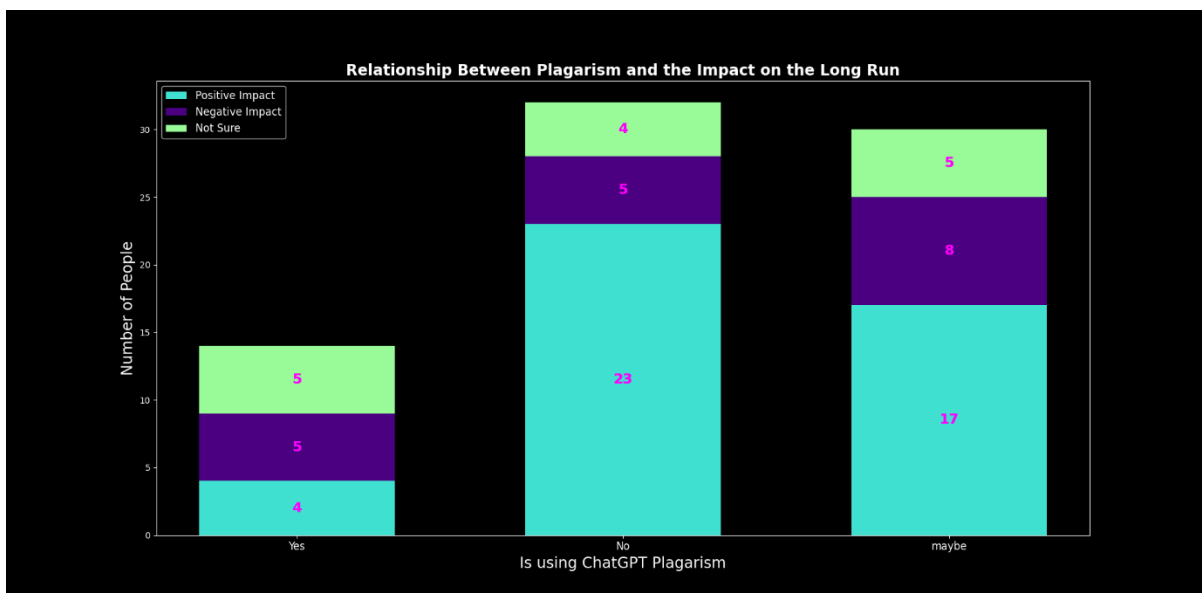


Figure 5: Relationship Between Adapting ChatGPT and the Impact on the Long Run

8) Last, when asked if they would recommend ChatGPT to someone, 75% of the people responded Positively whilst, 23.7% of the people weren't sure and responded with "maybe" with the minority responding negatively with a percentage of 1.3%.

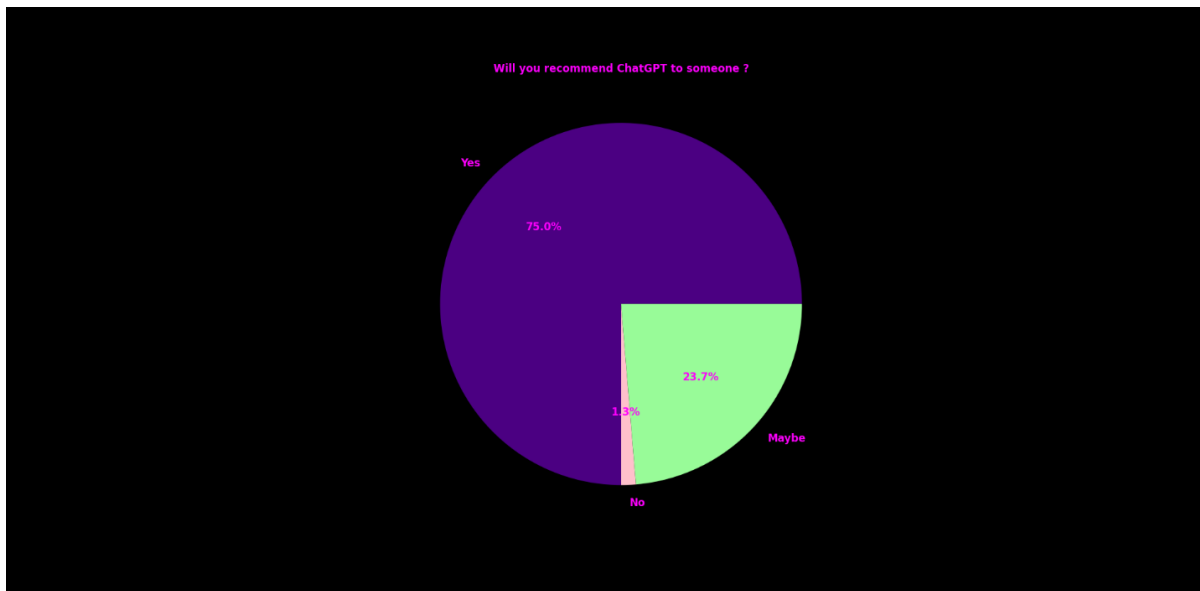


Figure 6: Will you recommend ChatGPT to someone?

Benefits and Limitations of ChatGPT

Benefits:

1. Students can use this artificial intelligence to explore deeper into a particular topic that interests them.
2. Students can use ChatGPT as a correcting and learning tool which gives feedback to improve the work done.
3. ChatGPT provides quick access to a variety of subjects in real time.
4. High intelligence and a wealth of resources are core features of ChatGPT which aid in the research field.
5. Since it's accessible at any time anywhere, it replaces student's dependency on teachers and others.
6. With its translations, vocabulary exercises and grammatical explanations, ChatGPT can be a useful tool for language learning.

(entrepreneur , 2023)

Limitations:

1. This artificial intelligence can ruin the student's ability to think creatively as they are provided an easy way to search up the information needed.
2. Users cannot rely completely on ChatGPT's results as they are not always 100 percent accurate.
3. ChatGPT sometimes misinterprets the input question resulting in incorrect output.
4. The outcomes of ChatGPT can be biased if the data it was trained on is biased.

(entrepreneur , 2023)

Future of ChatGPT:

ChatGPT has turned out to be bane and boon. ChatGPT is a highly valuable tool due to the vast amount of knowledge it has access to, but it also poses a question of whether the use of it to help the students in their studies is ethical or not. It also makes you wonder how it will affect the future of learning and teaching.

Everyone who's anxious with ChatGPT's introduction needs to make peace with it and figure out how to use it in such a way that it's beneficial for everyone, cause this era is the era of technology.

Potential uses of ChatGPT by the teachers:

1. Teachers could use it to expedite the process of revision by using ChatGPT as a summarising tool to reduce the material to its core elements.
2. It could also be used to come up with extra practice questions on the spot as an exercise or even in-class quizzes to strengthen a student's understanding of the topic.
3. It could be used as an aid in grading. Use of ChatGPT for grading will help teachers dedicate more time to students and let the professors help the students navigate their way through the course. (Entrepreneur, 2023)

If used wisely ChatGPT could be one of the best tools created to aid the education system. There must be some rules and restrictions to prevent its use from getting out of hand and potentially harming a student's knowledge and making them slack off.

Conclusion:

In conclusion, there is a substantial possibility that ChatGPT will have a widespread impact on the education system in near future given the fast spread of ChatGPT as seen in (Point 8 under “findings from data collected from the survey”). Furthermore, by taking (Point 7 under “findings from data collected from the survey”) into consideration, we can see that people who have voted against the adaptation of ChatGPT into the education system have done so mainly due to the possible negative impact in the long run, which is largely connected to the usage of ChatGPT being plagiarism which can be seen in (Point 5 under “findings from data collected from the survey”), (The total relationship described above can be seen clearly in Figure 7 below). Therefore, to maximize the positive impact and reduce the negative impact of ChatGPT on education, academia should evolve in a way to either integrate ChatGPT into their education system or develop a solution to detect the use of ChatGPT for educational purposes. Furthermore, given the release of ChatGPT – 4 which is considered to be a more reliable version in comparison to ChatGPT (Digital Trends, 2023), academia can expect its reliability to increase relative to that discussed under (Point 6 under “findings from data collected from the survey”).

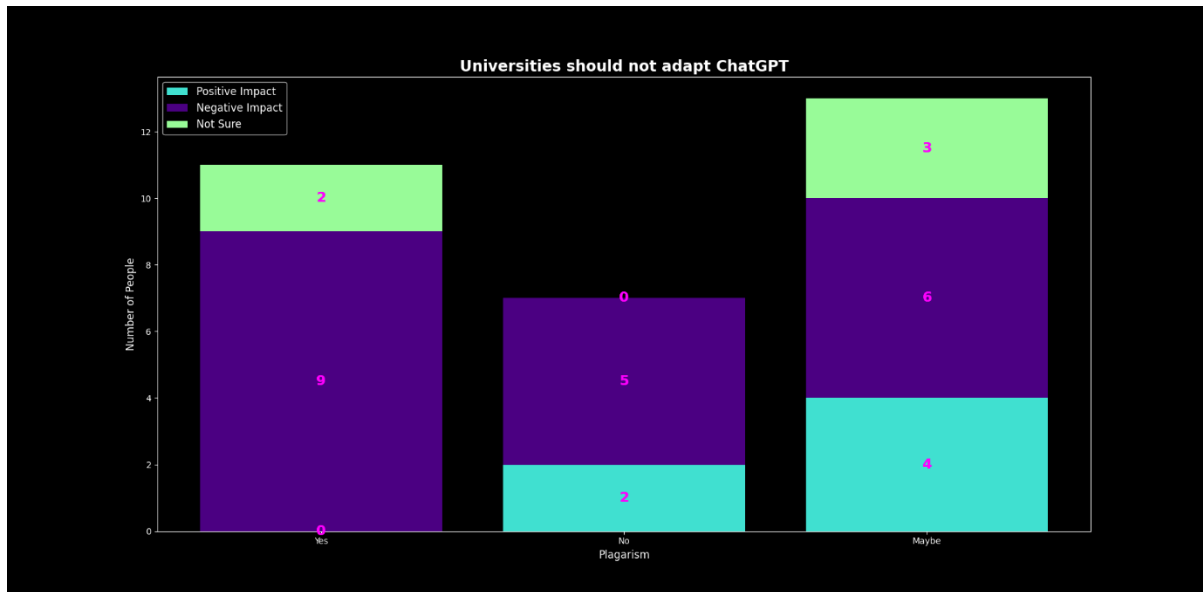


Figure 7 - Relationship showing Plagiarism and Negative Impact for people who voted against university adaptation of ChatGPT.

Appendices

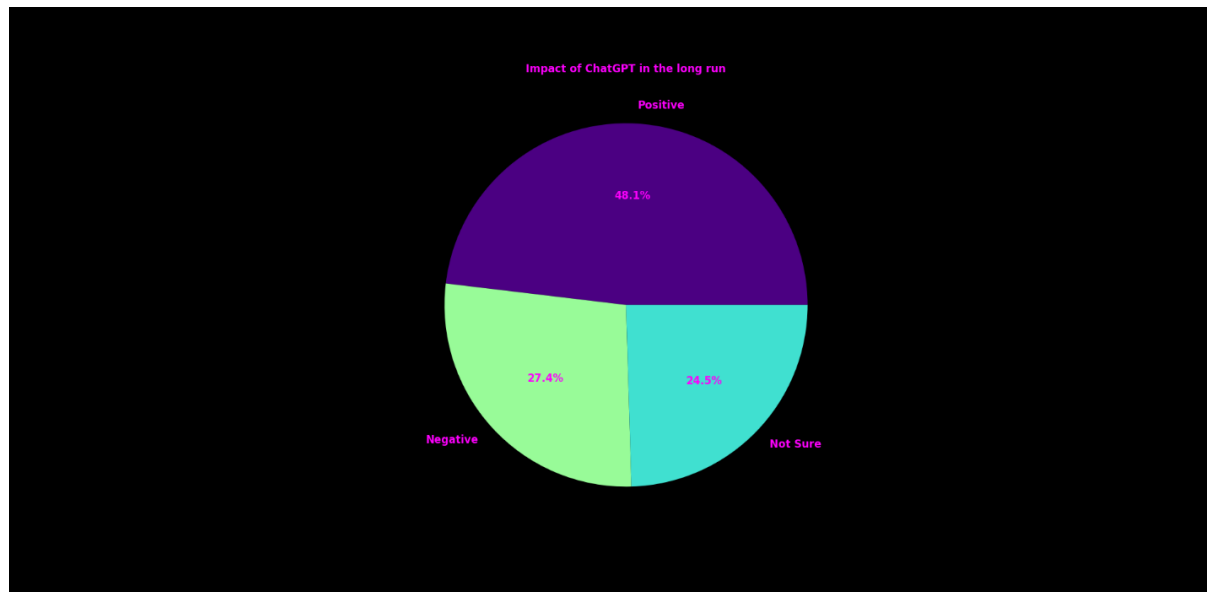


Figure 8: Impact of ChatGPT in long run

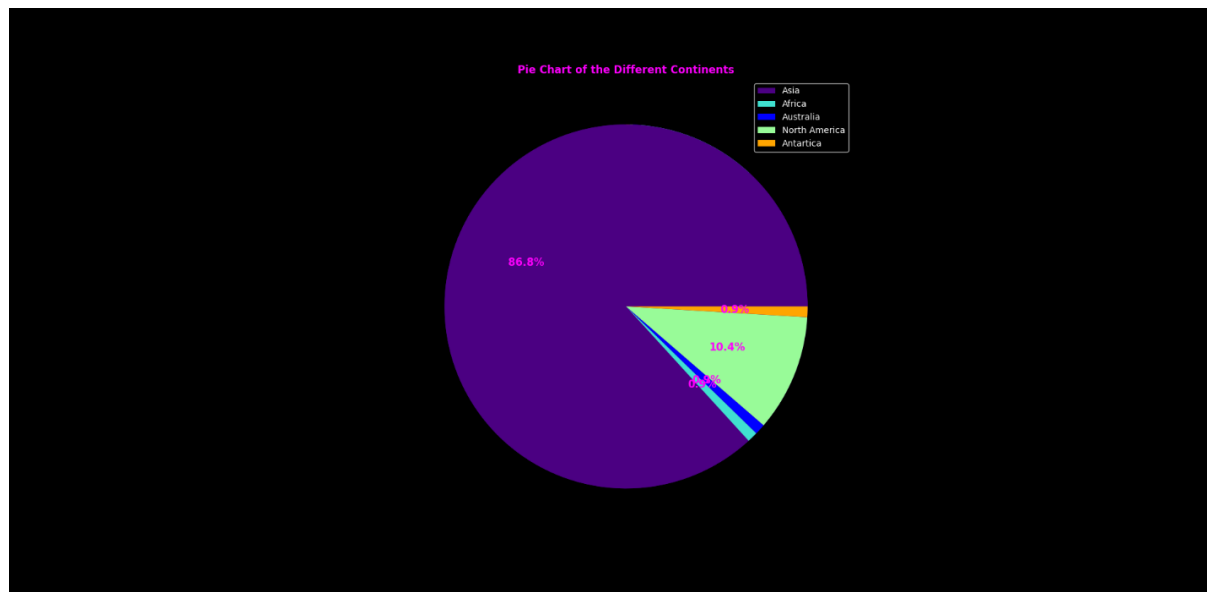


Figure 9: Continents covered in the survey

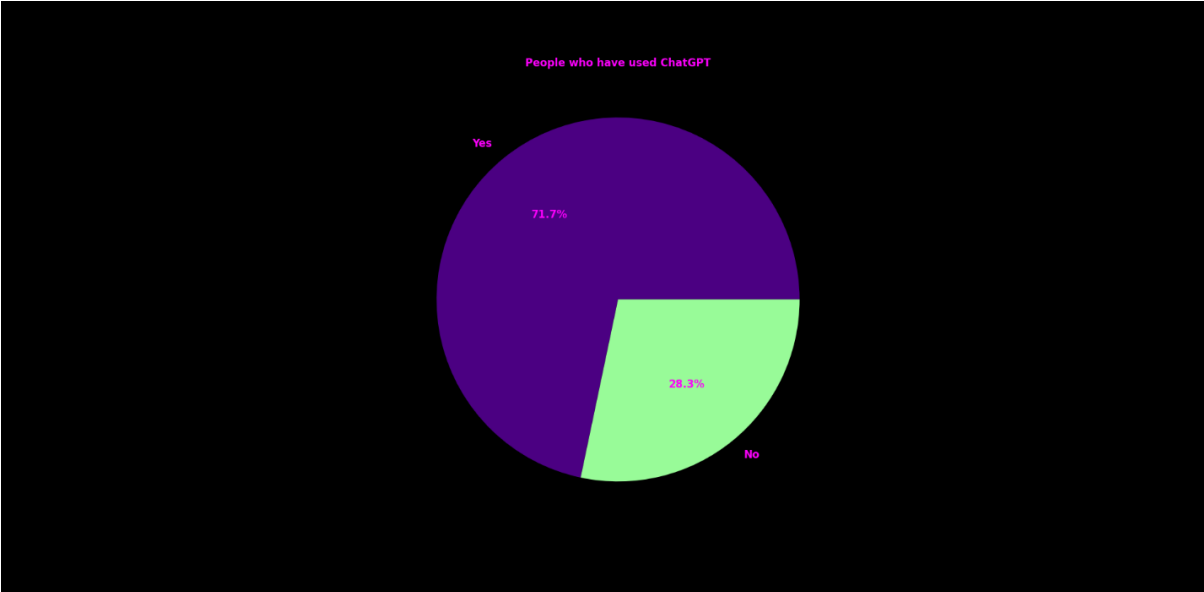


Figure 10: People who have used ChatGPT

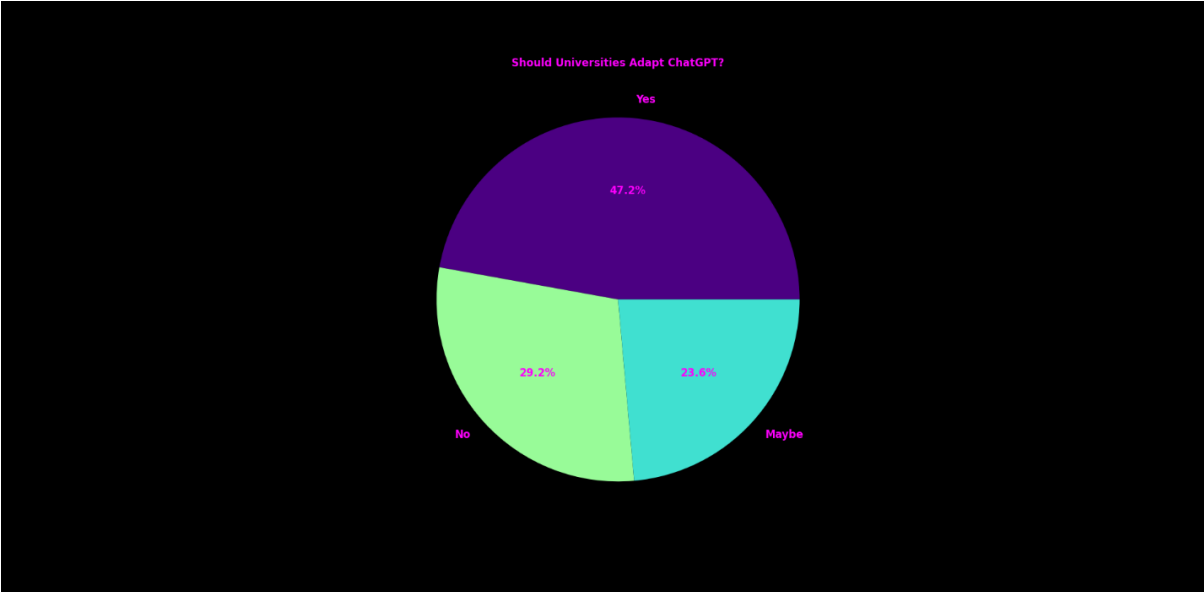


Figure 11: Should universities adapt ChatGPT?

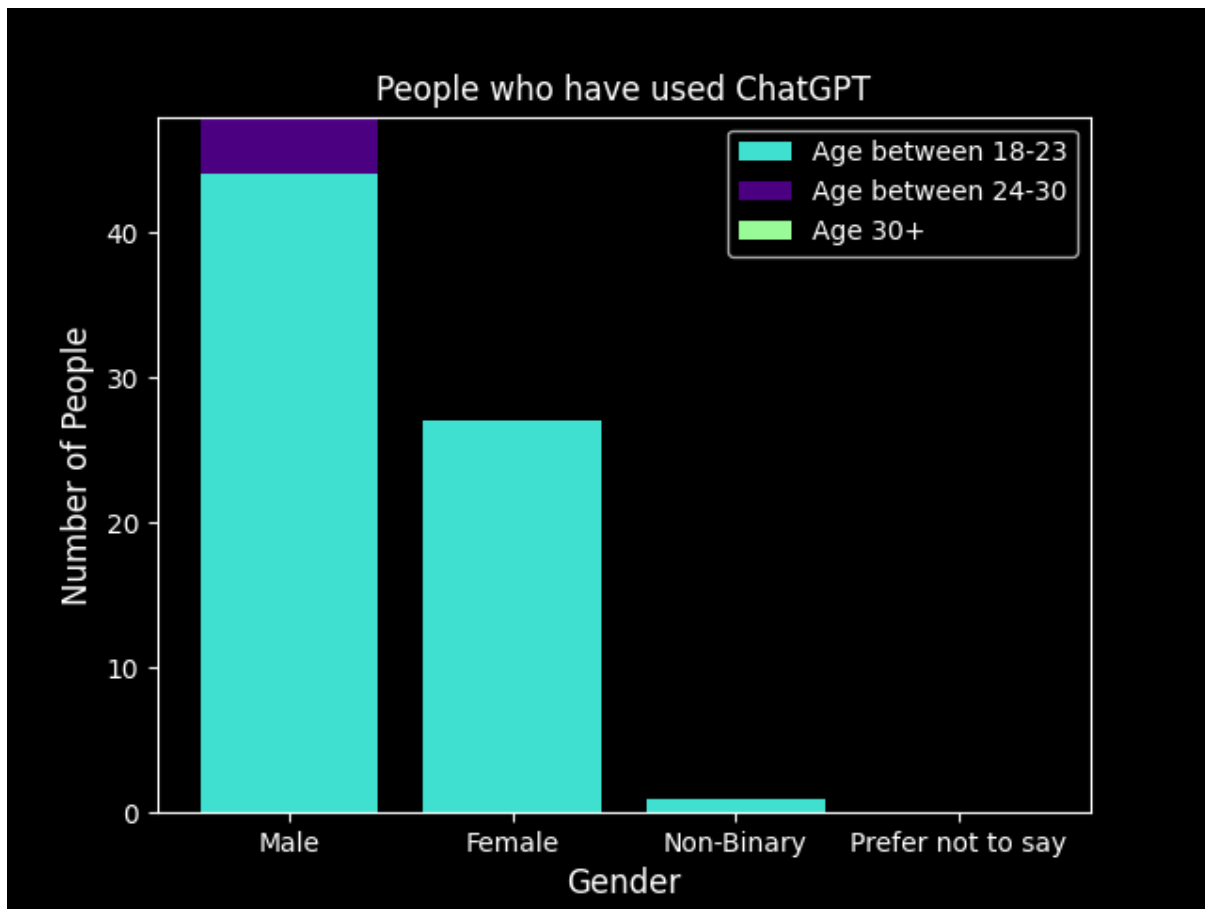


Figure 12: People who have used ChatGPT across various age groups and genders.

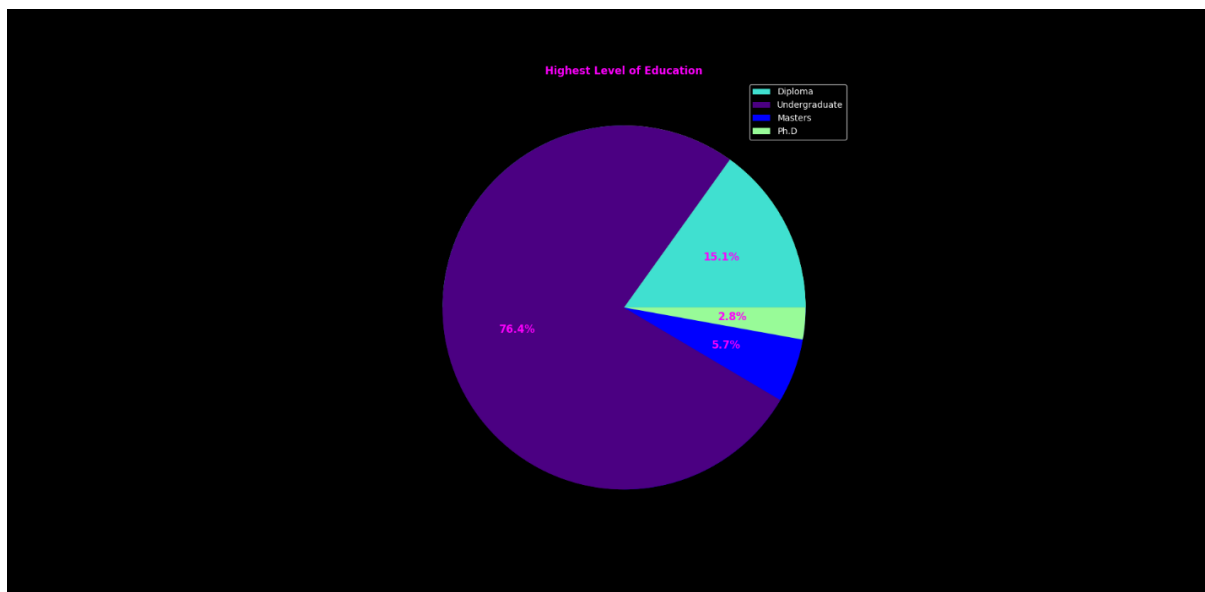


Figure 13: highest level of education of people who participated in the survey.

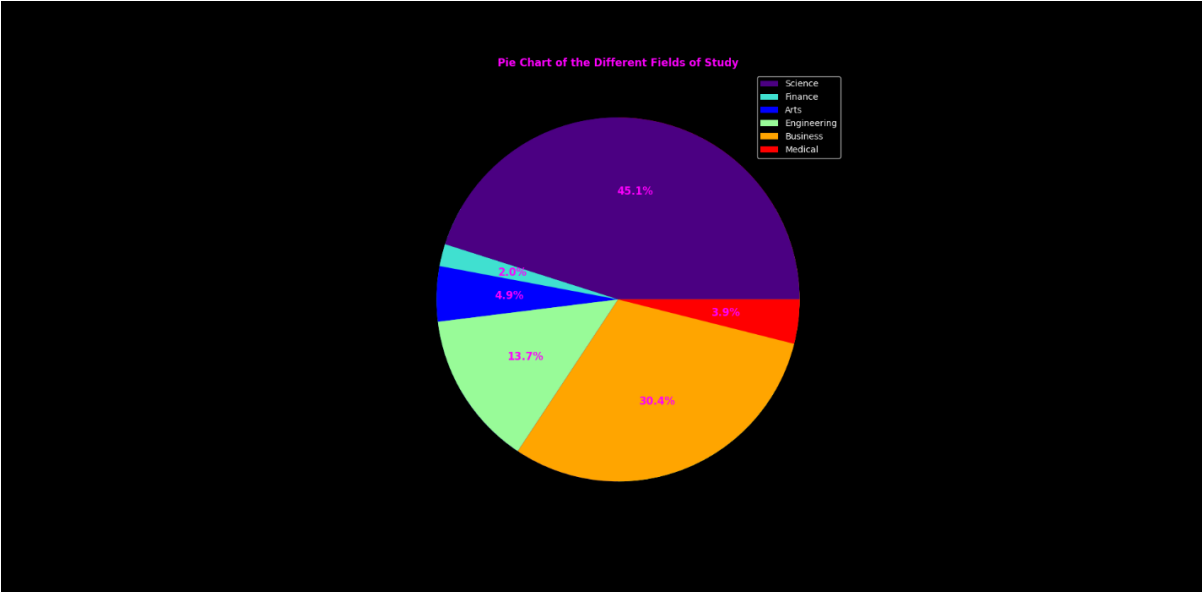


Figure 14:field of people who participated in the survey

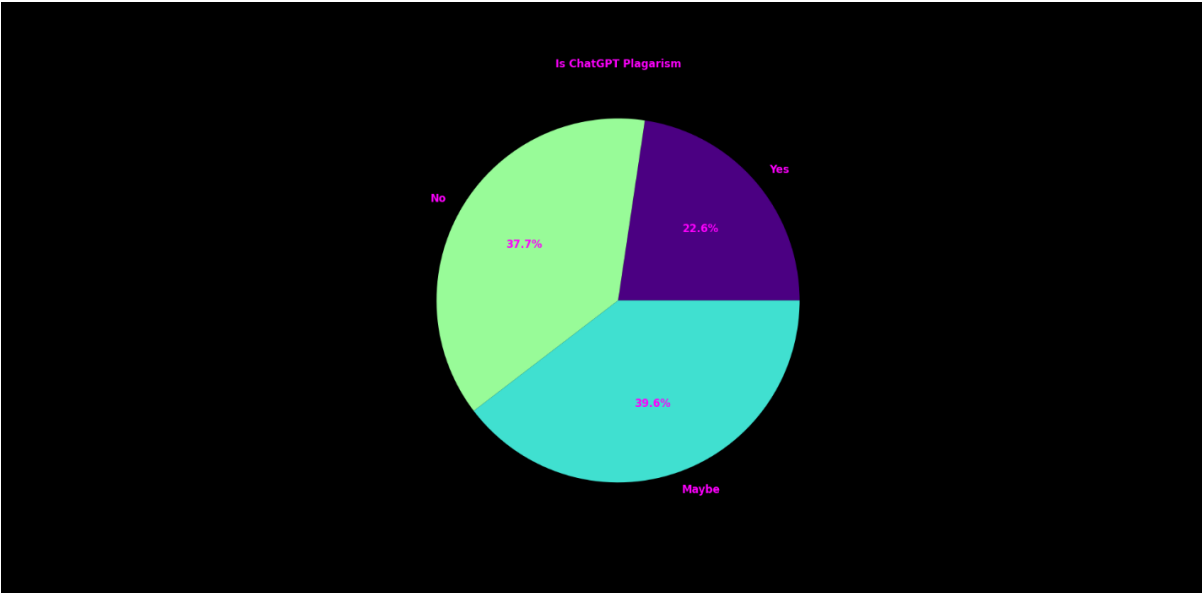


Figure 15: is ChatGPT plagiarism?

Bibliography

- Dice. (2022, November 4). Retrieved from Dice.com: <https://www.dice.com/career-advice/reported-apple-hiring-freeze-could-extend-into-next-year>
- Digital Trends. (2023, March 17). *digitaltrends.com*. Retrieved from [www.digitaltrends.com: https://www.digitaltrends.com/computing/gpt-4-vs-chatgpt/](https://www.digitaltrends.com/computing/gpt-4-vs-chatgpt/)
- entrepreneur . (2023, February 16). *entrepreneur* . Retrieved from entrepreneur : <https://www.entrepreneur.com/science-technology/how-will-chatgpt-change-education-and-teaching/445018>
- Entrepreneur. (2023, february 16). *Entrepreneur*. Retrieved from Entrepreneur: <https://www.entrepreneur.com/science-technology/how-will-chatgpt-change-education-and-teaching/445018>
- Fedus, L. (2023, march 3). *MIT technology review*. Retrieved from MIT tecnology review: <https://www.technologyreview.com/2023/03/03/1069311/inside-story-oral-history-how-chatgpt-built-openai/>
- MIT technology review. (2023, march 3). *MIT technology review*. Retrieved from MIT technology review: <https://www.technologyreview.com/2023/03/03/1069311/inside-story-oral-history-how-chatgpt-built-openai/>
- Wikipedia. (2023, March 23). *Wikipedia*. Retrieved from [www.wikipedia.com: https://en.wikipedia.org/wiki/ChatGPT](https://en.wikipedia.org/wiki/ChatGPT)