

Exploring the Use of ChatGPT in Academics: A Survey-Based Study

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Introduction

Created by OpenAI and launched in November 2022, ChatGPT is an artificial intelligence chatbot using OpenAI's deep learning GPT-3 language model. Users converse with ChatGPT by entering a prompt, which is then interpreted and responded to. Additionally, previous responses and prompts both from ChatGPT and the user are saved such that interactions become real-time 'conversations' (OpenAI, 2022). ChatGPT quickly became popular due to its versatility in usage, being able to answer questions, create and debug code, generate creative content (scripts, narrative prose, song lyrics) and much more. However, concern has especially come up in academia regarding ChatGPT's ability to freely and easily generate coherent on-demand responses which can be used by academics to write papers or answer questions on tests and assignments with almost zero effort. This paper reports on a survey conducted on academia (mostly undergraduate students) regarding their opinions and thoughts about ChatGPT, including how they use it and how they think the technology should be addressed academically.

Figures

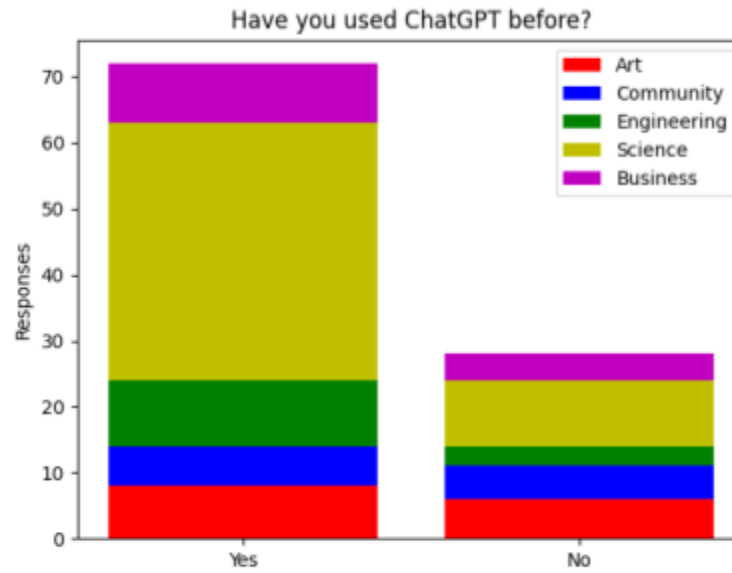


Figure 1: ChatGPT usage by faculty

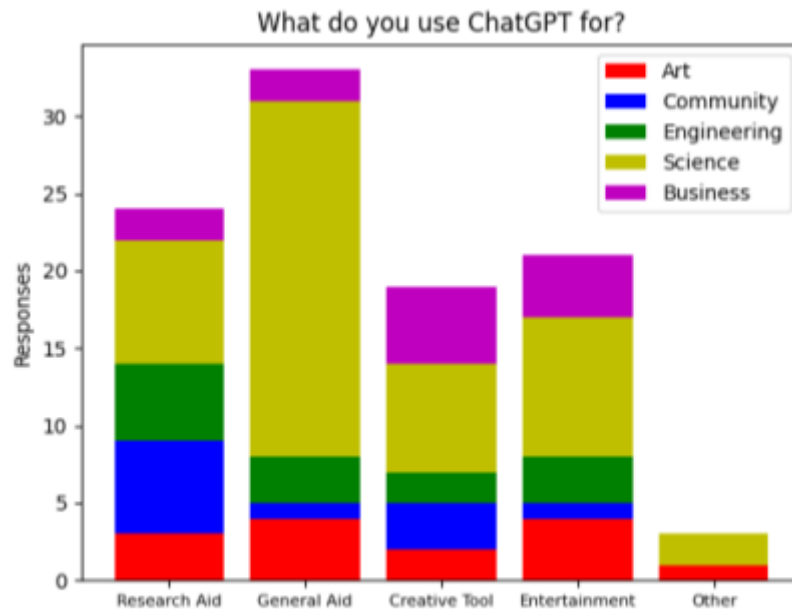


Figure 2: ChatGPT's varied usages by faculty

ChatGPT should be used by students as an AID on assignments and Tests

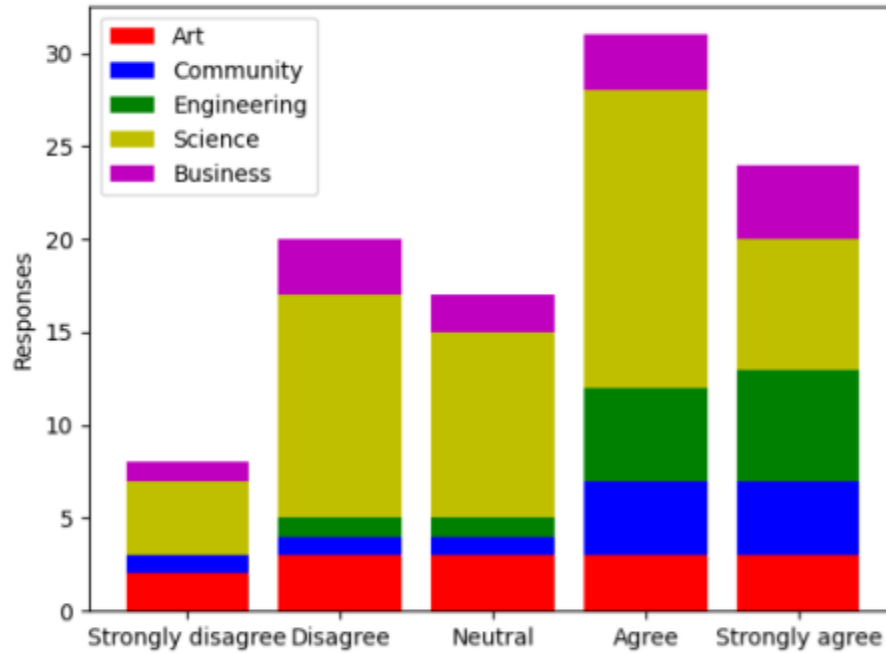


Figure 3: Opinions on ChatGPT's usage as an aid by faculty

ChatGPT solutions should not be used as direct answers for tests

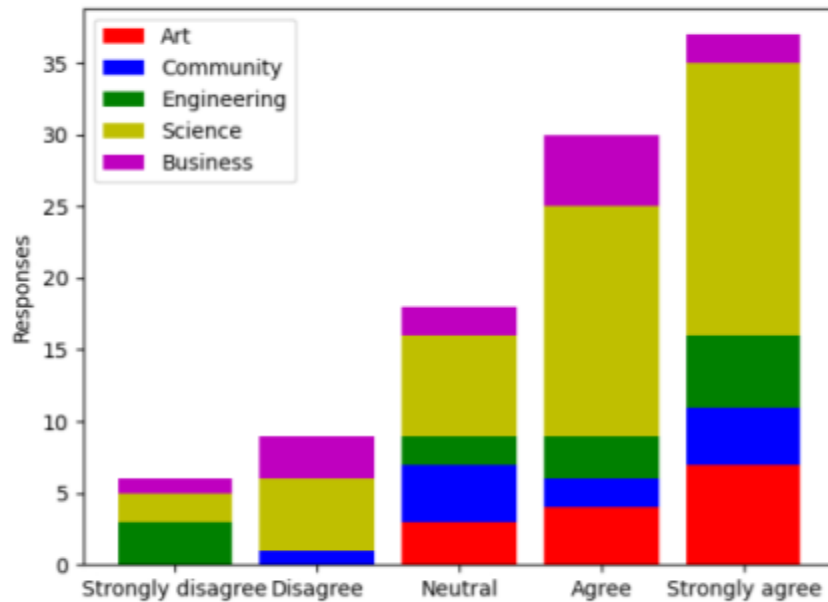


Figure 4: Opinions on ChatGPT's usage as an 'answer machine' by faculty

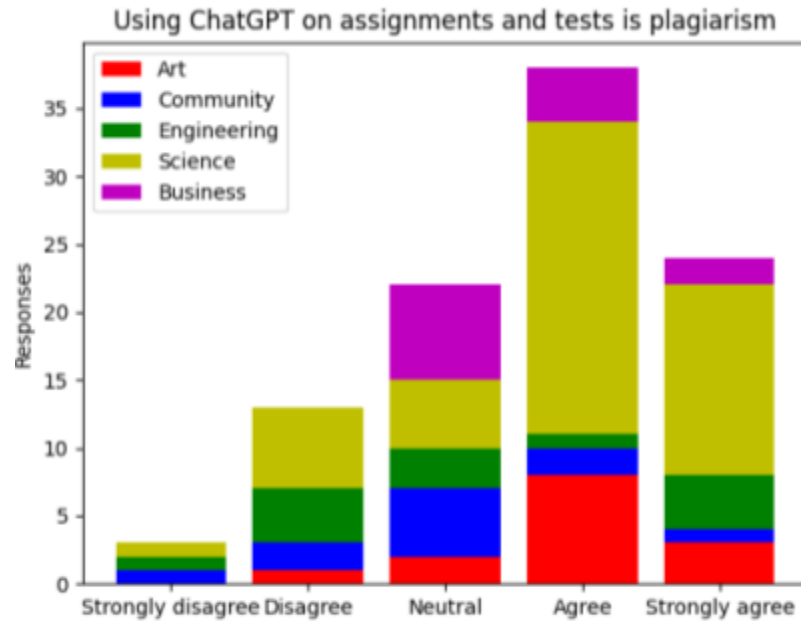


Figure 5: Opinions on ChatGPT as plagiarism by faculty

post-secondary academic integrity policies should apply to ChatGPT usage

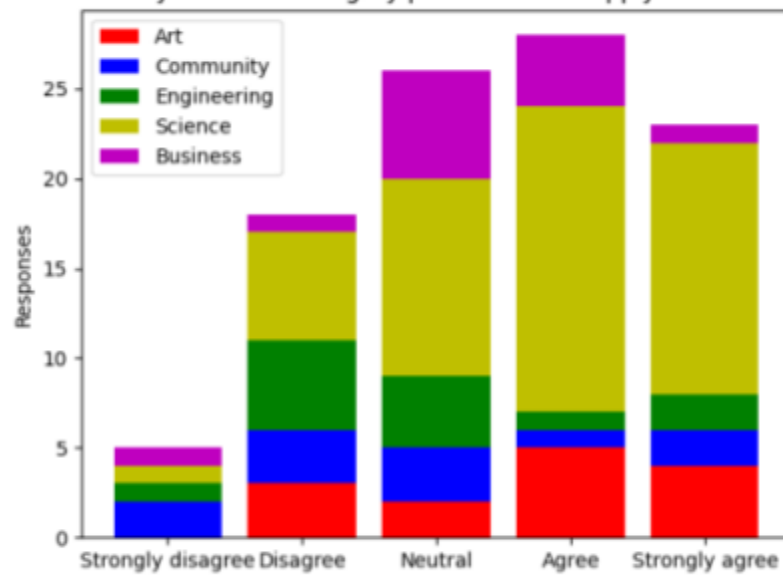


Figure 6: Opinions on if ChatGPT is as exactly punishable as plagiarism by faculty

Students should be permitted to use ChatGPT as an academic reference

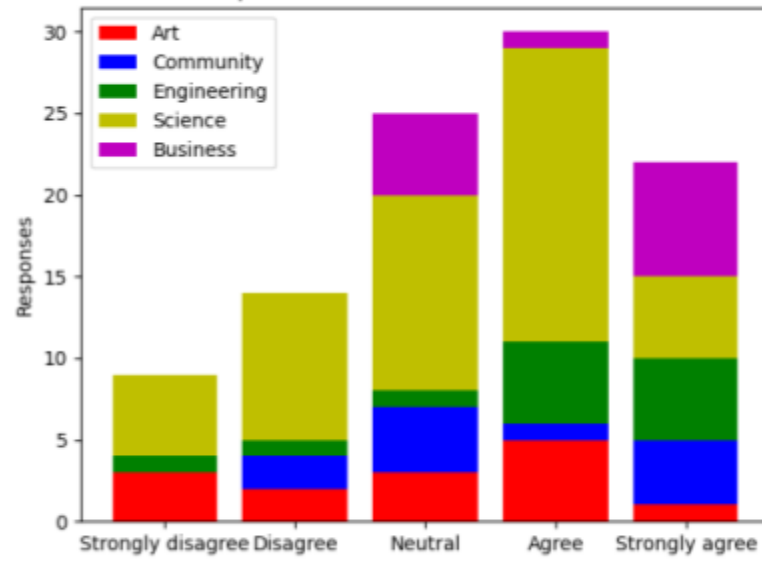


Figure 7: Opinions on ChatGPT as an academic reference by faculty

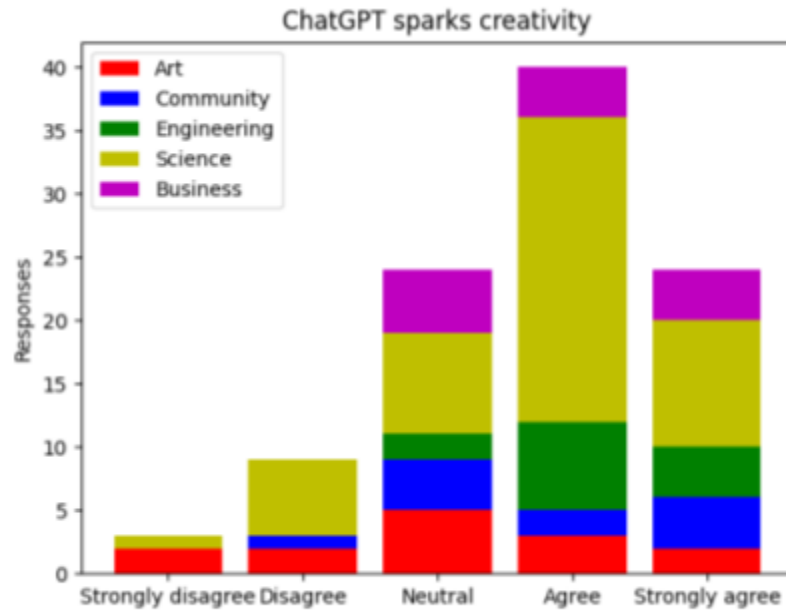


Figure 8: Opinions on ChatGPT's creative value by faculty

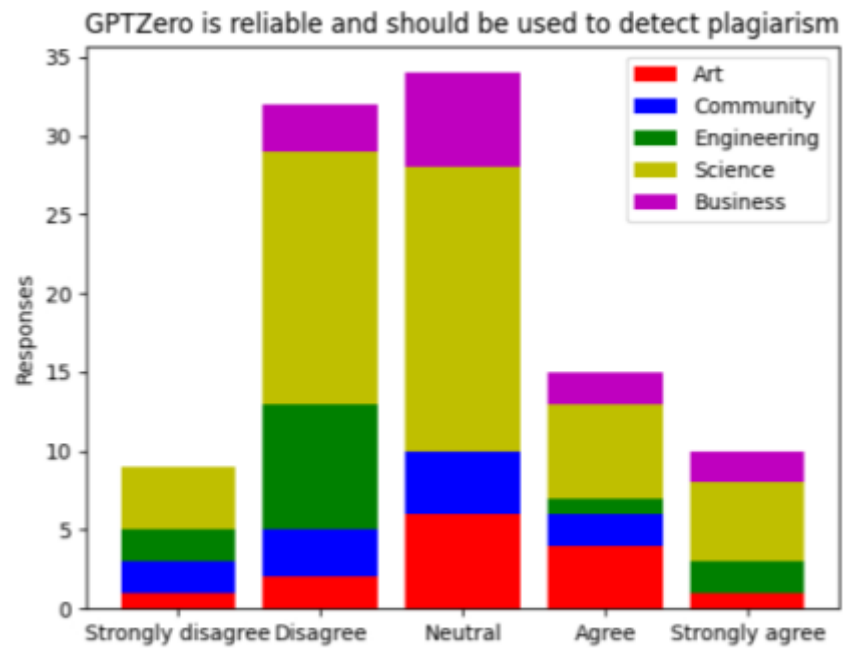


Figure 9: Opinions on the integrity of GPTZero by faculty

Findings

Based on the limited pool of answers, many of our independent variables skewed towards specific answers. Thus, we found it best to base our finding on the most diverse of the independent variables: faculties. Most students interviewed by the survey have used ChatGPT before ([figure 1](#)). ChatGPT is used for a broad variety of different purposes, but most users of the chatbot tend towards using it for general aid, especially students in science faculties ([figure 2](#)). However, the usability of ChatGPT as an academic aid is contentious; faculties of art, business, and science take a neutral stance with their answers being spread out almost evenly, while the faculties of community services and engineering seem to side with it being used as an aid ([figure 3](#)). This is further supported through responder results when asked about the use of ChatGPT as an academic reference ([figure 7](#)), which shows very similar results. Each faculty's varying opinions on ChatGPT as a direct academic aid shows the respective trust that each group puts in the chatbot beyond simply a starting point for their work. Based on the significant tendency towards 'strongly agree' on [figure 4](#) and [figure 5](#), it is clear that all faculties agree that using ChatGPT to gain direct solutions on tests is plagiarism. However, as seen in [figure 6](#), it is not yet generally agreed upon if using ChatGPT should be punished the same as plagiarism, suggesting that 'classic' plagiarism and chatbot plagiarism are treated differently by the responders. This also may indicate a desire for future academic policies to branch out and consider AI-related dishonesty as a separate case from other plagiarism. All faculties reach consensus that ChatGPT can be used creatively ([figure 8](#)). Meanwhile, the use of other technology such as GPTZero to detect plagiarism is still not accepted by academics - the main answer provided is disagree ([figure 9](#)). This indicates that most believe GPTZero is untrustworthy to detect plagiarism, or even differentiate plagiarism from honest work.

Benefits and Limitations

As technology progresses forward with inventions such as ChatGPT, educators around the world are asking the same question: Is the evolution of technology to the detriment of students' comprehension of learning material? The main issue brought up by educators is the misuse of technology by students to complete assignments without actual understanding of key concepts and basic strategies, which are critical for future assignments (Taiyeb et al., 2023). Teachers claim that the current use of ChatGPT causes the need for its use in the future, which in turn defeats the purpose of assignments. Furthermore, educators have brought up concerns over the difficulty of detecting when an assignment has been plagiarized using chatbots, which devalues the effort that honest students put into their assignments.

However, supporters of the academic use of ChatGPT argue that it can greatly benefit students, referencing the wide variety of uses for the chatbot to support their claims. ChatGPT can be used to help students study - for example, students can provide ChatGPT long texts and prompt the AI to summarize or take notes on the key points of the reading, promoting a deeper understanding of the material while saving effort and time (Timothy, 2023). Furthermore, ChatGPT can also devise study schedules and assist with time management, quiz students on important topics, provide feedback and peer-editing on writing, answer critical questions for academia, and guide students step-by-step through difficult problems (Mallow, 2023). ChatGPT's capability of responding to any prompt given to it allows it to serve as an unparalleled aid in student learning despite its risk to academic integrity - the question remains, however, as to whether or not allowing its use would be worth the gain.

Future

OpenAI still has many plans for ChatGPT's future beyond fixing common issues. As of March 14th, 2023, ChatGPT has begun to adopt the GPT-4 model for paid users - an upgraded language model similar to GPT-3. Capable of processing 25000 word prompts (eight times more than the previous version) (OpenAI, 2023), as well as photo and video inputs, it also reportedly surpasses GPT-3 in almost every way . As the rigidity of academia struggles to keep up with the change brought on by ChatGPT, it is likely that most institutions will adopt counter-technology such as GPTZero to guard against academic dishonesty, as well as changing teaching and examination practices to thwart or adapt to chatbot use (Grady, 2023; Dilmegani, 2023). But as time goes on, education will change and evolve just as technology like ChatGPT does. As ChatGPT improves in power and utility, it could change the face of academia.

Conclusion

Based on the results of our survey, it seems that the majority of the faculties agreed that ChatGPT is a useful tool as an academic reference in their studies as well as aids for assignments and tests, with engineers and science students leaning slightly more into its usage. Most see ChatGPT as plagiarism in cases when it is used for assignments and tests, but only for providing direct solutions. Mixed opinions appear when determining if post-secondary academic integrity policies for plagiarism should be applied similarly to the use of ChatGPT for direct solutions, suggesting that perhaps future academic policies should consider the two separately. As for being able to detect said plagiarism, students have a clear distrust of GPTZero's ability to detect plagiarism. Therefore, the use of ChatGPT in academics should not be allowed by universities until there are accurate tools that can detect AI generated answers, and proper standards and policies regarding ChatGPT.

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