



Ethical Analysis of ChatGPT in Academia

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What is ChatGPT

- An AI language model developed by OpenAI. It is widely available by an online chatbot interface.
- Designed to respond to prompts given by a user by generation of human-like responses.
- Gained recognition due to its accessibility and its application in problem solving across a multitude of topics, such as programming, mathematics, logical reasoning.
- Gained notoriety in academia due to its potential as a tool for plagiarism.



History

- ChatGPT was released on November 30, 2022.
- Based on the GPT family of language models, specifically an improved version of GPT-3.
- GPT are language models trained to generate human-like text.
- It is a sibling model to another model InstructGPT, giving more detailed responses with safety mitigation and filters to prevent insensitive responses.

(OpenAI, 2022)



Benefits

- Conducting research can be exhausting due to the amount of information available online. ChatGPT can be used to summarise the key points in a concise format (Rushda, 2022)
- Rather using ChatGPT as a source of truth, it can be used for brainstorming and exploration of information.
- Its ability to keep context, ChatGPT can be used as a tool for debugging, especially in applications of computer science.
- Due to the nature of the way the GPT language models are trained, more use of ChatGPT will improve its responses.

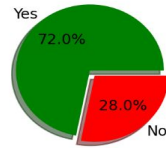


Limitations

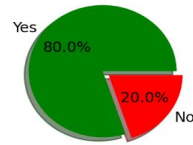
- Although powerful, ChatGPT will occasionally generate incorrect responses and may produce harmful instruction (OpenAI, 2023)
- Subject to “artificial hallucination” wherein it gives a confident and plausible-sounding responses but are in actuality nonsensical.
- ChatGPT lacks emotional intelligence, causing failure to appropriately respond to complex emotional situations.
- The set of data that ChatGPT is trained may contain biases or prejudices. This can cause the AI to unintentionally produce discriminatory responses (Marr, 2023)
- It has trouble generating lengthy pieces of text or text that is follow a specific format (Montti, 2023)
- Does not offer original insight to data (Montti, 2023)

Data

Undergraduate Population



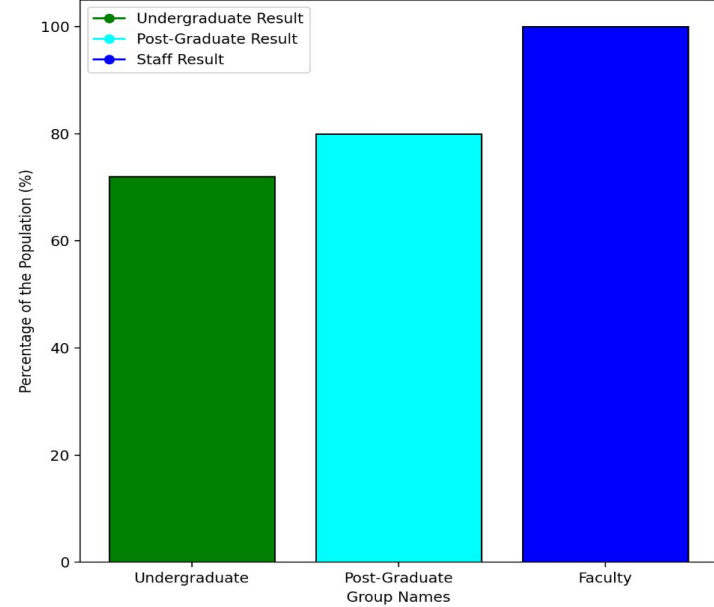
Post Graduate Population



Staff Population



Percentage of Each Academia Group's Population who believe ChatGPT is Plagiarism for Essay Writing



A majority of academia's distinct populations (Undergraduates, Post-Graduates, & Faculty members) view that it's not ethical to use ChaptGPT to write essays with

Data

- 100% of Professors are aware and have used ChatGPT. They all agree that using it for essays is plagiarism
- Professors are split when it comes to the use of ChatGPT for monetary and commercial purposes
- Graduate students all agree its use for essays is plagiarism
- Graduate students' opinions on research are split but they all agree that using it for monetary purposes is permissible

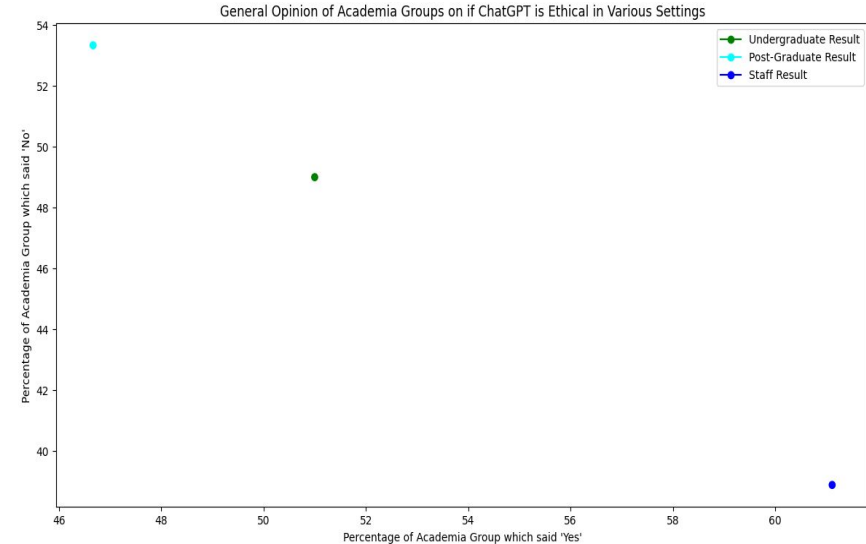
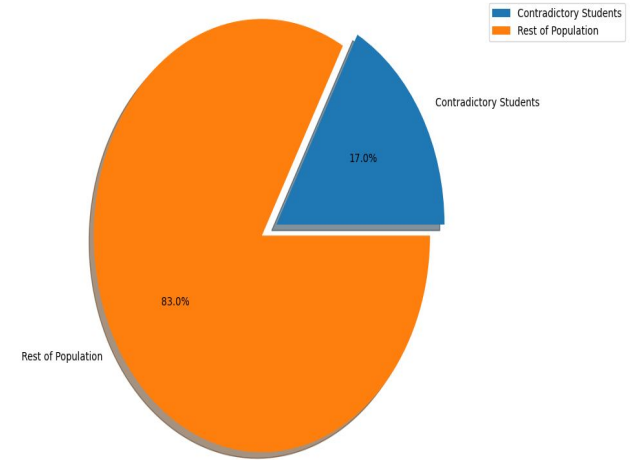


Figure 3: This scatter plot shows the relative percentages of all the distinct academia groups that said “yes, ChatGPT use is not ethical” and “no, ChatGPT use is ethical” for all 3 scenarios

Data

- 17% of undergrads believe that ChatGPT use inhibits their skills while also believing that its use for essays is ethical.
- This key trend may indicate that future undergraduate students may rely heavily on ChatGPT if stricter enforcement is not in place
- This key trend may also indicate a severe degradation of undergraduate students' skill sets in these areas:
 - Critical Thinking
 - Communication skills
 - Creativity

Contradictory Undergraduate Students who Believe ChatGPT inhibits Student Development and is still Ethical for Essay Writing vs. the Rest of Undergraduates





Future

- Placeholder for undergraduate students opinion on long term effects
- ChatGPT could become a replacement for writing original essays. This will force liberal art courses , where essays are a common component, to adapt (Roose, 2023)
- Future version of ChatGPT may go on to affect STEM courses
- More tools like ChatGPT to emerge
 - AI War between Microsoft and Google

Conclusion

- Academia does currently not have a favorable view on the use of ChatGPT in its institutions
- 50% of undergraduate and graduate students believe it is ethical to use ChatGPT while staff believe it is unethical



Conclusion

- Future study changes
 - Larger and diverse sample size
 - Ask professors in-person to do the survey rather over email
 - Sample size should be 1, 180, 883 people that also reflect the buildup of a university's areas of study
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