

Exploring Youth's Everyday Perception of Chat GPT

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Objective

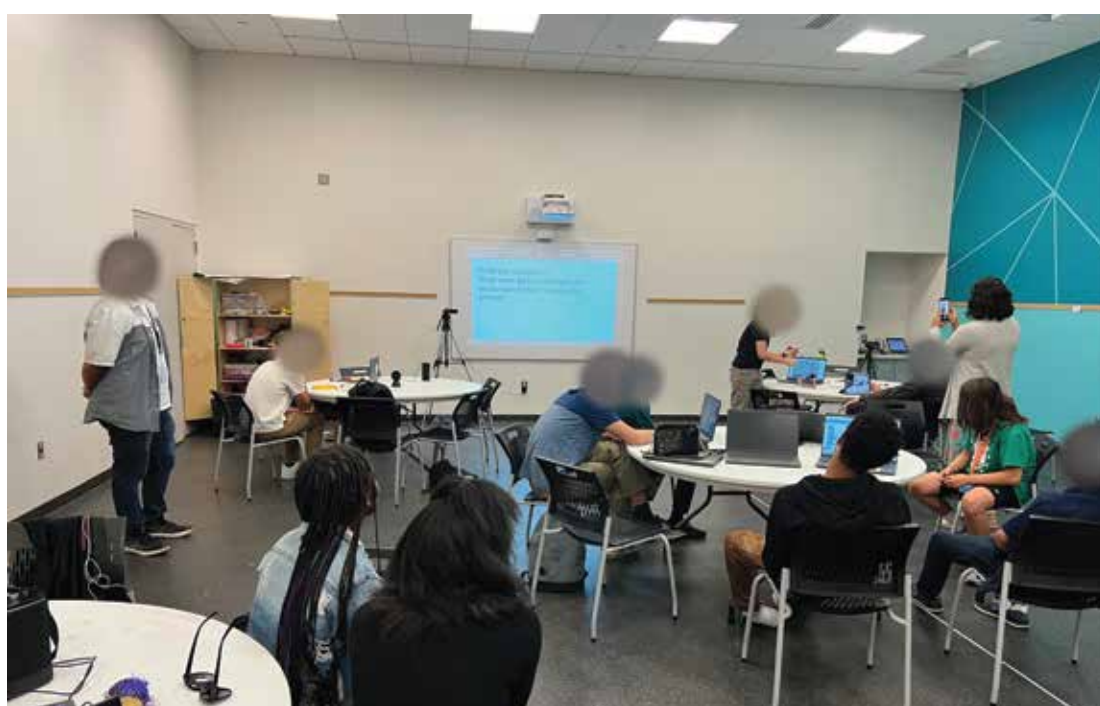
While the effectiveness of Chat GPT in classrooms has been studied, our knowledge about youth's perception of such large language models (LLMs) is limited. Understanding how **students view and engage with Chat GPT** will enable a more successful and personalized AI-based curriculum.

Context & Method

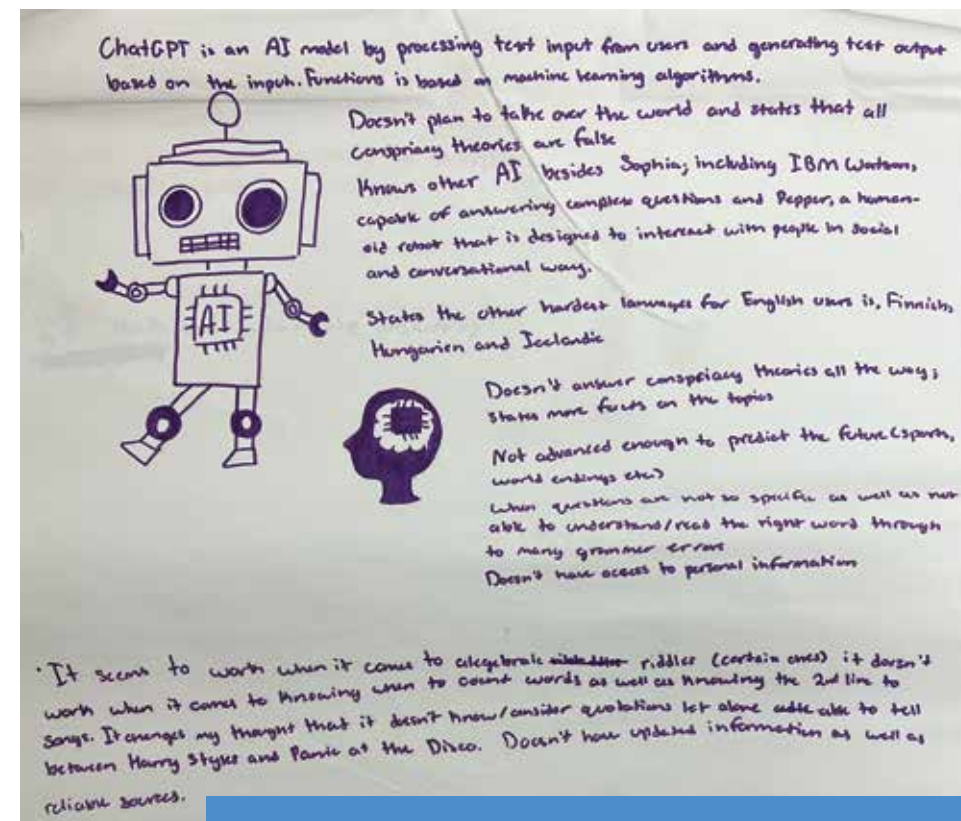
- Machine learning workshop in spring and summer 2023
- 16 consenting participants: 9th grade students with an interest in STEM
- Held at local science center in Philadelphia

Data

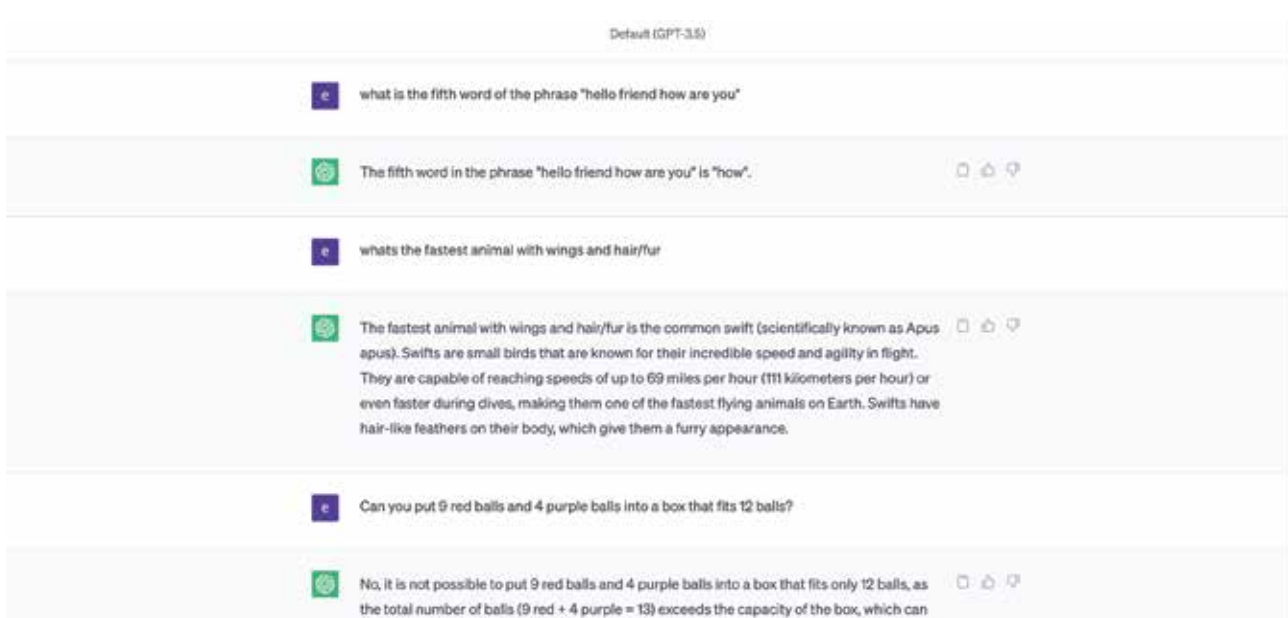
- Audio, video, and screen recordings
- Participant artifacts (posters, failure case reports, and exit tickets)
- Text logs from student interaction with Chat GPT



The 9th grade students met at a local science center to explore machine learning topics.



Participants wrote and illustrated their ideas about how Chat GPT works.



Our team analyzed the participants' Chat GPT logs to find examples of the keywords and themes we identified.

Findings

1 Youths have varying levels of knowledge about how Chat GPT is trained and generates prompts

- Students agreed that Chat GPT used prior data derived from the Internet (22 mentions of data sources).
- Some students were not aware that Chat GPT analyzed patterns in a large dataset of text and did not make use of search algorithms.
- None mentioned the specific steps to training the Chat GPT algorithm.

2 Youths saw Chat GPT as a helpful tool to write and brainstorm, but stated that it had limitations

- The most popular usage of Chat GPT was for writing essays and to help brainstorm ideas for characters and artwork.
- Participants also observed various limitations of the LLM:
 - Inability to predict future events
 - Lacks context to answer personal questions
 - Ability to make mistakes and spread misinformation

3 Youths disagreed about whether Chat GPT had morals and emotions or if it could be used to cheat

- Students debated whether copying from Chat GPT was considered plagiarism or not.
 - Copying won't do harm since Chat GPT has no emotion.
 - Chat GPT is the work of another person, so copying is illegal.
- Some students argued that Chat GPT possessed morality, while others noted that it cannot answer moral questions.

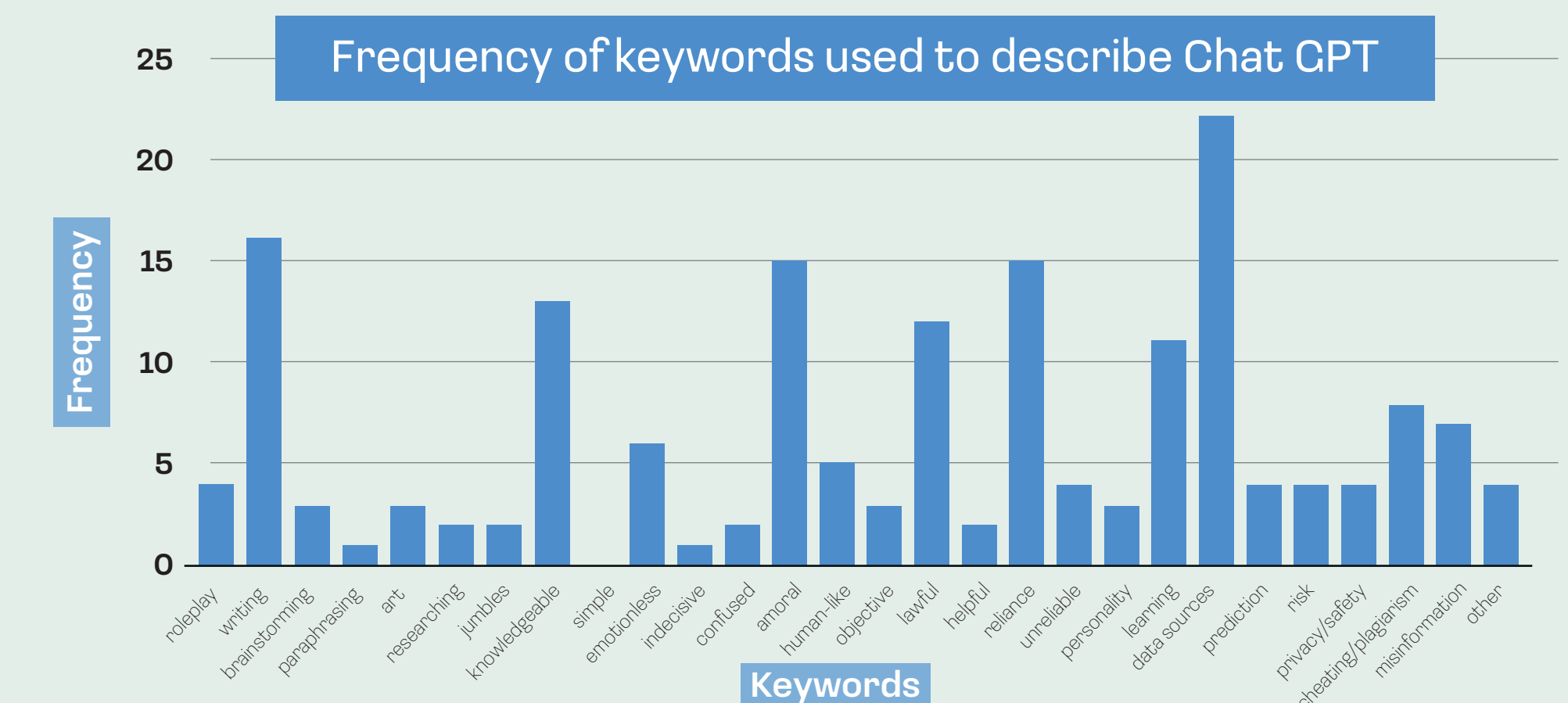
Acknowledgements

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Analysis Process

- Examined the audio transcripts, labeling relevant excerpts with keywords.
- The keywords were grouped into four categories: uses, traits, how it works, and ethics.
- Coded all 8 posters and 5 audio transcripts, then tallied the number of appearances for each keyword and wrote summaries identifying common behaviors.

Uses	Traits	How it works	Ethics	
roleplay	jumbles	human-like	learning	risk
writing	knowledgeable	objective	data sources	privacy/safety
brainstorming	simple	lawful	prediction	cheating/plagiarism
paraphrasing	emotionless	helpful		
art	indecisive	reliance		misinformation/conspiracy
researching	confused	unreliable		
	amoral	personality		



Significance & Next Steps

Expand this investigation Use a K-12 classroom environment as opposed to a STEM summer camp at a science museum.

Explore different AI/ML models For example, the AI image generator "DALL-E" is an excellent visual tool to observe examples of harmful bias.

Experiment with different grade levels We examined only high school freshmen. How do middle school or elementary school students' perceptions differ?