



NAME: ChatGPT and the impact on education 


DATE: May 19, 2024 2:22 PM

DESCRIPTION OF TECHNOLOGY
OpenAI has trained a model called ChatGPT which interacts in a conversational way. The dialogue format makes it possible for ChatGPT to answer followup questions, admit its mistakes, challenge incorrect premises, and reject inappropriate requests. In this cycle we explore the impact of ChatGPT on society and specifically on (higher) education.


HUMAN VALUES 

If information can be synthetically generated, what is then the worth of it and what does it say about us as humans if even those highly-humanized things like creating (text or images) can be outsourced?


CHATGPT is a bullshitter (it creates Bullshit as meant by Harry Frankfurt). We humans have a hard time distinguishing human-generated bullshit from AI-bullshit. This says a lot about us, of course....

TRANSPARENCY 


Because the tool is trained on a very large dataset based on reinforcement learning and part of a capped-profit (formally nonprofit) company, total transparency about how the technology works cannot be expected. During a 2016 conversation about the technological singularity, Altman said that "we don't plan to release all of our source code" and mentioned a plan to "allow wide swaths of the world to elect representatives to a new governance board".

IMPACT ON SOCIETY 

Until now people could go to Google to ask a question and get a lot of results to choose from. But ChatGPT will change this concept forever by giving a direct and automated answer to any question (including coding questions!) directly, based on a large language model that the model is trained upon. This is better than Google because it limits choices, it curates the answer and it is a system that is natural to interact with. But does it really solve a problem?
...


STAKEHOLDERS 

- Students
- Teachers
- Authorities
- Parents

SUSTAINABILITY 


How much energy does AI consume? A paper from the University of Massachusetts Amherst stated that training a single AI model can emit as much carbon as five cars in their lifetimes. ChatGPT is a big one, consuming probably more.

On the other hand, artificial intelligence (AI) can also be part of the solution, by calculating energy consumption solutions.


HATEFUL AND CRIMINAL ACTORS 

In an educational context, someone who cheats is a bad actor. CHATGPT is quite capable of writing essays or open book articles, so that's cheating. However, this 'problem' has been around for much longer with tools like Google, Translate and Grammarly. So the question is whether something will change in essence or whether it is simply an extra tool for cheaters (and thus a stimulus for educational innovation).


There are however other ways to use CHATGPT to break th...

DATA 


As we are not the developers of this tool we cannot know everything about the underlying data. But, from what we know now, it looks like each users gets his/her own answer from the AI, because it is also building upon previous questions and answers. This might be a problem, because people can get stuck in their own bubbles because of that.

FUTURE 

The whole concept of education can change because of this tool. People have to re-think education in many ways.

PRIVACY 

Yes. There is a lot of data collected and it can be used in all kinds of ways. OpenAI is pretty clear and honest about that. See: <https://openai.com/privacy/>

INCLUSIVITY 

The tool seems to be trained on a very large, but specific set of data. We have already seen some examples where the tool is favoring white males over females or people with color.


Most training material is biased on English source data. for example, when using it for outdoor questions on security of climbing, German is a dominant source language, but ChatGPT uses secondary, derived English sources.

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HUMAN VALUES 

How is the identity of the (intended) users affected by the technology?

To help you answer this question think about sub questions like:

- If two friends use your product, how could it enhance or detract from their relationship?
- Does your product create new ways for people to interact?...

TRANSPARENCY 

Is it explained to the users/stakeholders how the technology works and how the business model works?

- Is it easy for users to find out how the technology works?
- Can a user understand or find out why your technology behaves in a certain way?
- Are the goals explained?
- Is the idea of the technology explained?
- Is the technology company transparent about the way their...

IMPACT ON SOCIETY 

What is exactly the problem? Is it really a problem? Are you sure?

Can you exactly define what the challenge is? What problem (what 'pain') does this technology want to solve? Can you make a clear definition of the problem? What 'pain' does this technology want to ease? Whose pain? Is it really a problem? For who? Will solving the problem make the world better? Are you sure? The problem definition will help you to determine...

STAKEHOLDERS 

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by...

When thinking about the stakeholders, the most obvious one are of course the intended users, so start there. Next, list the stakeholders that are directly affected. Listing the users and directly affected stakeholders also gives an impression of the intended context of the technology.

...

SUSTAINABILITY 

In what way is the direct and indirect energy use of this technology taken into account?

One of the most prominent impacts on sustainability is energy efficiency. Consider what service you want this technology to provide and how this could be achieved with a minimal use of energy. Are improvements possible?

HATEFUL AND CRIMINAL ACTORS 

In which way can the technology be used to break the law or avoid the consequences of breaking the law?

Can you imagine ways that the technology can or will be used to break the law? Think about invading someone's privacy. Spying. Hurting people. Harassment. Steal things. Fraud/identity theft and so on. Or will people use the technology to avoid facing the consequences of breaking the law (using trackers to evade speed radars or using bitcoins to launder...)

DATA 

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into...

There are fundamental issues with data. For example:

- Data is always subjective;
- Data collections are never complete;
- Correlation and causation are tricky concepts;
- Data collections are often biased;...

FUTURE 

What could possibly happen with this technology in the future?

Discuss this quickly and note your first thoughts here. Think about what happens when 100 million people use your product. How could communities, habits and norms change?

PRIVACY 

Does the technology register personal data? If yes, what personal data?

If this technology registers personal data you have to be aware of privacy legislation and the concept of privacy. Think hard about this question. Remember: personal data can be interpreted in a broad way. Maybe this technology does not collect personal data, but can be used to assemble personal data. If the technology collects special personal data (like...

INCLUSIVITY 

Does this technology have a built-in bias?

Do a brainstorm. Can you find a built-in bias in this technology? Maybe because of the way the data was collected, either by personal bias, historical bias, political bias or a lack of diversity in the people responsible for the design of the technology? How do you know this is not the case? Be critical. Be aware of your own biases....

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