Project 1 – Individual Part: GenAI

CoTaPP 2023-2024

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General Instructions

- Fill out your name and Solis ID.
- Each member of the team completes this assignment individually.
- All solutions are submitted as a **PDF document** as part of **Project 1**.

Objective

By completing this assignment, students will begin to understand the use of generative artificial intelligence (GenAI) tools in educational contexts, fostering the development of an informed and critical perspective.

1: GenAI Student Guide

Read the GenAI student guide available at https://iticse23-generative-ai.github.io/media/ITiCSE_2023_WG4_Mature_Draft_Jul_9_2023_AppendixD.pdf

2: "So what if ChatGPT wrote it?"

Access the following opinion paper: "So what if ChatGPT wrote it? Multidisciplinary perspectives on opportunities, challenges, and implications of generative conversational AI for research, practice and policy" (available at https://doi.org/10.1016/j.ijinfomgt.2023.102642).

1. Read the introduction.
2. Read Table 1 (page 4) and select one contribution from each perspective area (2.1. Broad perspectives on generative AI, 2.2. Organisational and societal impacts, 2.3. Impact on the academic sector, 2.4. Ethical issues, and 2.5. Challenges, opportunities, and research directions).
3. Make a small summary (one or two paragraphs) for each of the five selected contributions.

Contribution 1: ChatGPT: disruption and what next? - Viswanath Venkatesh

The skills required in the world powered by ChatGPT and related technologies will be different. The as sumptions underlying various domains of research will be impacted by

ChatGPT. Life, society and personal interactions will change. It's a technology, it's inherently disruptive, and it's a great opportunity.

2.2.6.1. ChatGPT in banking services – Emmanuel Mogaji, Mousa Ahmad Albashrawi Sriparna Basu and Sangeeta Khorana

Explore the prospect of ChatGPT in financial services,
It would not be surprising to see how ChatGPT can be integrated. However, banks operate in a highly regulated sector and technology adoption is often strategically explored.
marketing communications may not solely rely on ChatGPT; human involvement would still be needed to verify the trustworthiness of the insights and personalised offers. There is also a possible need to declare the source of information – has this campaign been auto-generated by an AI machine? Therefore, marketing should take advice in the context of that knowledge. Since many customers still need to be conversant with the chatbot, banks need to know their customers' needs and how far to push the technology drive. With the growing power of financial technology and the disruption in the sector, many consumers are looking beyond their banks for financial advice and investment options There are significant implications for financial services providers to ensure that the correct information is provided and made available to the consumers to allow them to make an informed decision.

4.2.8.1. Disrupting higher education and human communication by Language models - Marijn Janssen

ChatGPT outcomes are probabilistic/. We should neither try to ban ChatGPT nor embrace the technology indiscriminately. Like any technology progress, critically appropriate is needed, and experimenting to find ways to take advantage of new technology without having its disadvantages. The risk is that students' independent thinking and language expression skills might deteriorate and not be practiced by using ChatGPT. Also, students need to develop skills to scrutinise the generated text and code and be critical towards the outcomes. Experimentation is needed to understand the full consequences. ChatGPT should not result in a next filter bubble.

4.3.1.1. ChatGPT and Ethics – 'ChatGPT Doesn't Matter'? - Laurence Brooks

ChatGPT is flawed and poses dangers, he first thing is to make people aware of these failings, transparency being one of the key elements in the arsenal to tackle unethical technologies. Since these are open access systems, and we all have access to them, it will not be what we use, or don't use, them for, but how we choose to use them.

1. 4.4.6.1. ChatGPT: challenges, opportunities, impact and research agenda - Paul Latreille

2. Reflecting an existing theme in the literature on academic misconduct/integrity, educators will need to wrestle further with assessment design. One hitherto unmentioned corollary of ChatGPT's ability to author essays is its impact on parts of the assessment ecosystem. For example, it seems likely to prove highly disruptive to the business models of contract assessment-writing services. Much of the discussion of ChatGPT focuses on its negative potential in terms of academic misconduct. However, models of the type represented by ChatGPT also offer a number of affordances that could substantially enhance educational practice and student learning For educators, two aspects are vital. The first is the need "to reflect on our learning goals, outcomes, and assessments… We should not let our existing approaches remain simply because this is the way we have always done them" (CMS|W, 2023). The second is that such a task will be challenging given pedagogy is likely to be playing catch-up for some time; (further) educational research in this domain is imperative!.

3: Self-reflection

Answer the following questions.

3. What advantages do you see in using Artificial Intelligence tools, like ChatGPT, in the learning process? How do you think these tools could improve your educational experience?

Personally, I appreciate the interactive aspect of a tool like ChatGPT. Currently I am learning to speak Spanish, and it helps that I can chat with chatgpt in Spanish. Not only can I practice having a discussion in another language, I can ask for feedback on my grammar and word use. Another advantage is that can make learning more efficient, sometimes when I struggle with understanding a piece of text, I ask ChatGPT for a summary or expand on certain concepts. Of course, I am careful to look for errors in its response.

4. Can you identify any disadvantages or limitations in using these Artificial Intelligence tools? Are there situations where you prefer not to use them?

Essentially, these tools have no knowledge of what is factually correct or logical, rather they know what is the most likely response. So asking for very specific information can lead to hallucination, and it won't recognize it is hallucinating. Example is provided h. Here: https://www.nature.com/articles/s41537-023-00379-4. A tool like ChatGPT is mainly useful for

general information or generation of new text, not for handling complex projects/subjects. Moreover, any AI tool will have some bias, this should be taken into consideration.

5. How do you think these Artificial Intelligence tools should be responsibly used in an educational context? How can you ensure that you are using these tools ethically (i.e., in a way that respects norms and principles of correct behavior, including honesty, fairness, respect for others, privacy, equity, and integrity)?

I think for students it's important to recognize that a tool like ChatGPT shouldn't be the crutch of a project or your understanding of a subject. This way you will not be able to correct its shortcomings nor will you be prepared to deal with later projects in your career. I think the ethical way of working on a project using a tool like ChatGPT is that you're the one in control, you're the one explaining the tool what has to be done, not the other way around. Of course, the tool may make useful suggestions and insights. And always consult other sources when it comes to understanding concepts.

6. What privacy concerns might you have when using Artificial Intelligence tools in learning? How can you protect your personal information while using these tools?

Any prompt is of course saved by the company. Therefore, any data provided to ChatGPT should be randomized, especially if the data is sensitive, so that privacy is protected.

7. How could you address ethical issues that may arise in using Artificial Intelligence in education? Do you think some guidelines or rules should be established for their use in this context?
Currently I feel the topic of discussion is 'how to restrict AI use in education?' However, the cat is out of the bag. I think it's not reasonable to expect students not to use tools like this. Therefore, I think people need to rethink how to organize the education. I would propose to categorize education into sections: What is essential that students need to know how to do without any tool, and what kind of projects/assignments can students to with the help of tools. Computers and search engines already drastically changed education.