Initial Post

by Georgios Papachristou - Tuesday, 17 December 2024, 4:26 AM

Hutson (2021) presents the benefits and risks of AI writers, such as GPT-3. He argues that LLMs can be used to write songs, essays, stories, interviews, technical manuals, and even poets. However, as he mentions, such models do not have the common sense needed to understand the meaning of their outcome, as they work by observing the statistical relationships between the words and phrases it reads. This lack of understanding of the world, could result in producing nonsensical answers or even producing text that includes biases; i.e. "nurses are women", racist and extremist content; i.e. adopting words used by Nazis. On top of that, there is a risk that sensitive personal information used during the training phase of the model can be extracted and then used for malicious purposes.

On the same page with Hutson, Naik et al. (2024) argues that ChatGPT can be used for creative writing by providing ideas, drafting first versions of poets and stories, providing synonyms and words or phrases that improve the quality of the product, as well as providing constructive feedback to improve the content and format of the end product. In addition, such LLMs can be used in education to prepare lectures, mock exams and tutorials that can be used both by tutors and students and enhance the educational experience (Lund et al., 2023). Finally, such models can be used as well for customer support and service, by responding to customers requests suggesting ways to resolve issues identified; given the high volume of customer requests that a company receives on a daily basis, such LLM support frees up a lot of human beings' time.

Nevertheless, all the above-mentioned applications of LLMs come with their risks and drawbacks. Risks such as data privacy, copyright infringement, and plagiarism should be considered when LLMs are used, and in turn before the application or sharing of the end

product a review is needed by humans to ensure that such risks are avoided (Bender et al., 2019).

References

Bender, E., Gebru, T., McMillan-Major, A., & Shmitchell, S. (2021). On the Dangers of Stochastic Parrots: Can Language Models Be Too Big? *FAccT '21: Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency* (pp. 610-623). New York: Association for Computing Machinery.

Hutson, M. (2021) Robo-writers: the rise and risks of language-generating AI. *Nature.* Available from: **https://www.nature.com/articles/d41586-021-00530-0** [Accessed 11.12.2024]

Lund, B., Wang, T., Mannuru, N., Nie, B., Shimray, S., & Wang, Z. (2023). ChatGPT and a new academic reality: Artificial Intelligence-written research papers and the ethics of the large language models in scholarly publishing. *Journal of the Association for Information Science and Technology, 74*(5), 570-581.

Naik, D., Naik, I., & Naik, N. (2024). Leveraging the Use of ChatGPT: Exploring Its Real-World Applications Including Their Related Ethical and Regulatory Considerations. *TechRxiv.*

Peer Response

by Ben Zapka - Tuesday, 17 December 2024, 4:59 PM

Hello Georgios,

Thank you for your insightful contribution. I especially like how you established the possibility of using GenAI for brainstorming and creating a first draft version of a writing. You present the

point that GenAI's most important use case in creating writings are creative writings due to the increased fault tolerance there as compared to, e.g., audit writing.

Adding to your ideas, I argue that AI is helpful to not just come up with new ideas in the brainstorming phase of the writing process, but also to manage ideas and structure them. This is supported by Albadawy and Khalifa (2024) and also connected to the thought of using GenAI to rewrite the own words in, e.g., a different style that you mentioned. Huff (2024) further stresses the ability of GenAI to take over routine tasks and this way come up with a first draft of any research or writing. Taking over routine tasks is just what we wish any automation to do so it frees up time for creative thinking, so this way GenAI can be of additional value in the process of creative writing. Routine tasks in the process of creative writing could, e.g., include ensuring the right text styling is chosen or even translating the resulting writing in different languages.

While GenAI is not at a point yet where its outputs can be directly used, after finetuning the outcomes, a final product can be presented. This way, GenAI is of great benefit in the process of creative writing.

Thank you for the inspiration you delivered by this contribution, establishing additional benefits of GenAI I did not think about in this way before.

Kind regards,

Ben

References:

Albadawy, M. & Khalifa, M. (2024) Using artificial intelligence in academic writing and research: An essential productivity tool. *Computer Methods and Programs in Biomedicine Update* 2024 (5). DOI: **https://doi.org/10.1016/j.cmpbup.2024.100145**

Huff, C. (2024) The promise and perils of using AI for research and writing. *American Psychological Association.* Accessible from: **https://www.apa.org/topics/artificial-intelligence-machine-learning/ai-research-writing** [Accessed 17.12.2024]

Peer Response

by Linga Murthy Kanuri - Tuesday, 31 December 2024, 12:23 AM

I agree with your thoughtful discussion on the potential and risks of AI writers like GPT-3, as highlighted by Hutson (2021). You have outlined how LLMs can be used in various fields, such as creative writing, education, and customer support. The fact that these AI tools can help with tasks like generating ideas, drafting content, and even offering constructive feedback is a valuable resource for many users. As you have pointed out, these tools can be especially useful in education to help create lectures and mock exams, which would then help improve the learning experience for students and tutors (Lund et al., 2023).

I could not agree more with your observation of the inherent risks with these AI tools, particularly their tendency to contain biases and deficiencies in common sense. Since many AI models produce content without knowing the proper contexts, as pointed out by Hutson (2021), it perpetuates harmful stereotypes and misinformation, especially on sensitive topics.

The other big concern is the risk of personal data being extracted from the training data of AI models, especially in the face of a surging increase in data breaches and privacy issues brought forth by Bender et al. (2019).

This discussion should be continued, as it reveals how we can mitigate these risks. You have rightly said that whatever the AI generates should be reviewed by a human before re-sharing or application, but what practical ways are there for responsible usage of these tools? Perhaps introducing strict ethical guidelines, including improving transparency about the data used to

train these models and installing robust systems that detect and remove noxious outputs, would help.

Also, while AI frees humans from most of their workload, one must consider what this will do to human creativity and job displacement in the long run. How will we make AI a tool for enhancement and not a replacement?

Overall, your post balances the many benefits and risks associated with AI writing tools, and I appreciate the depth you brought to this discussion.

References

Bender, E. M., Gebru, T., McMillan-Major, A., & Shmitchell, S., 2019. On the dangers of stochastic parrots: Can language models be too big? Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency, pp.1-9.

Hutson, M., 2021. Robo-writers: the rise and risks of language-generating AI. Nature, 591, pp.22-25.

Lund, M. L., et al., 2023. The role of AI in enhancing educational experiences. International Journal of Education Technology, 15(3), pp.115-130.

Summary

by Georgios Papachristou - Monday, 13 January 2025, 4:16 AM

In my initial post, I summarized Hutson's (2021) article regarding AI writers. According to his point of view, AI writers have a lot to offer when it comes to creative writing such as writing

essays, songs, technical manuals etc., but considering that they lack the common sense needed to understand the meaning of the concepts, they may either produce nonsensical answers or text that includes biases or even racist content.

Given Hutson's (2021) arguments on benefits and risks of AI writers, I presented the view of Naik et al. (2024) and Bender et al. (2019) who highlighted some positive aspects of LLMs such as their ability to draft stories, provide synonyms, and provide constructive feedback to improve the content and format of the end product, as well as the risks that such technology may pose including data privacy, copyright infringement, and plagiarism.

To my initial post, Ben replied, adding that AI writers could be of great help to manage and structure ideas as well and in turn they can be used for more than just providing fresh ideas in the brainstorming phase of a writing process (Albadawy and Khalifa, 2024; Huff, 2024).

Further to the discussion, Linga added another point to be considered when risks of AI writers are being presented. She pointed out that focus should be given to the mitigation of these risks, proposing that the introduction of ethical standards and the requirement for enhanced transparency with regards to the data used to train and tune these technologies could potentially prevent such risks.

To sum up, the benefits of the AI writers are of no doubt but so do the risks that human being should be aware of. Therefore, attention should be given to manage these risks adequately to reduce mainly the likelihood that such technologies will be used for malicious purposes.

References

Albadawy, M. & Khalifa, M. (2024) Using artificial intelligence in academic writing and research: An essential productivity tool. *Computer Methods and Programs in Biomedicine Update* 2024 (5)

Bender, E., Gebru, T., McMillan-Major, A., & Shmitchell, S. (2021). On the Dangers of Stochastic Parrots: Can Language Models Be Too Big? *FAccT '21: Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency* (pp. 610-623). New York: Association for Computing Machinery.

Huff, C. (2024) The promise and perils of using AI for research and writing. *American Psychological Association.* Accessible from: **https://www.apa.org/topics/artificial-intelligence-machine-learning/ai-research-writing** [Accessed 17.12.2024]