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CURRENT PROBLEMS OF USING CHATGPT IN MEDICINE

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The introduction of language models, such as ChatGPT, powered by artificial intelligence (AI), can lead to promising advancements in various domains, including medicine. ChatGPT models are designed to generate human-like responses to natural language queries [1], making them potentially valuable tools for healthcare professionals and patients. However, the application of ChatGPT in medicine presents several challenges and concerns that must be addressed for its successful integration into clinical practice. This article aims to explore the current problems associated with the use of ChatGPT in medicine and proposes potential solutions to address these issues.

Language models, such as ChatGPT, have gained significant attention in recent years due to their ability to generate coherent and contextually relevant responses. In medicine, ChatGPT holds promise for assisting healthcare professionals and patients in tasks such as diagnosis, triage, and employee education. However, several challenges hinder the widespread adoption of ChatGPT in medical settings. This article highlights the current problems associated with the use of ChatGPT in medicine and proposes potential solutions for each.

1. Data Privacy and Security

One critical concern regarding the use of ChatGPT in medicine is the privacy and security of patient data. Healthcare systems handle vast amounts of sensitive information, including medical records and personal identifiers. To ensure patient confidentiality, ChatGPT must adhere to stringent data protection regulations, employ robust encryption mechanisms, and implement secure storage and transmission protocols. Researchers and developers need to address these challenges to foster trust and compliance with data privacy regulations.

2. Accuracy and Reliability

Another significant challenge is ensuring the accuracy and reliability of ChatGPT-generated responses. While ChatGPT models demonstrate impressive language proficiency, they may occasionally generate incorrect or misleading information, potentially impacting patient care outcomes. Robust methods for fact-checking and validating responses are crucial to reduce the risk of erroneous or unreliable information being provided. Incorporating a feedback loop system, involving healthcare professionals to review and validate responses, can enhance the accuracy and reliability of ChatGPT in medicine.

3. Ethical Considerations

The integration of ChatGPT in medicine raises ethical concerns. For instance, the responsibility of providing medical advice lies with qualified healthcare professionals, and the reliance on ChatGPT alone could lead to patient harm. Proper guidelines and regulations should be established to ensure the responsible use of ChatGPT in medical decision-making. Transparent disclosure of the AI nature of ChatGPT should also be implemented, ensuring patients understand its limitations and the involvement of AI in their healthcare journey.

4. Bias and Fairness

ChatGPT models learn from large datasets that may contain biases present in the training data. Biases can emerge in various forms, such as racial, gender, or socioeconomic

biases, potentially leading to inequitable treatment recommendations or reinforcing existing biases in healthcare. It is imperative to regularly audit and retrain ChatGPT models, employing bias detection and mitigation techniques, and involving diverse healthcare professionals during the development and validation stages. Ongoing efforts should aim to minimize biases and ensure fair and equitable healthcare delivery.

5. Future Directions and Conclusion

Addressing the current problems associated with the use of ChatGPT in medicine requires a multidimensional approach involving collaboration between AI researchers, healthcare professionals, regulatory bodies, and patients. Future research should focus on developing robust data privacy frameworks, enhancing the accuracy and reliability of ChatGPT, implementing ethical guidelines, and mitigating potential biases. With proper safeguards and ongoing improvements, ChatGPT has the potential to revolutionize healthcare delivery by augmenting the capabilities of healthcare professionals and empowering patients with reliable and personalized information [2].

In conclusion, while ChatGPT holds promise in the field of medicine, several challenges need to be addressed for its successful integration into clinical practice. By focusing on data privacy and security, accuracy and reliability, ethical considerations, and potential biases, the limitations of ChatGPT can be overcome, leading to enhanced healthcare outcomes and improved patient experiences.

References

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