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Clinical Natural Language Technology for Heath Care

Natural Language Processing (NLP) is a crucial component of artificial intelligence that focuses on the interaction between computers and human language. It allows computers to interpret, manipulate, and understand human language, both spoken and written, making it a vital tool in today's data-driven world.

NATURAL LANGUAGE PROCESSING AND THE MEDICAL INDUSTRY

In the medical field, natural language processing (NLP) is revolutionizing patient care, clinical decision-making, and data management. It supports clinical decision-making with evidence-based recommendations and automates clinical documentation, saving manual data entry and increasing record accuracy. By producing tailored responses and instructional materials, natural language processing (NLP) improves patient engagement while expediting medical coding and billing and guaranteeing accurate reimbursement. All things considered, NLP is a vital tool that enhances healthcare access and delivery.

PROPOSED SYSTEM

The system created for this purpose can study through research papers and identify pertinent data for each publication. A Streamlit application is made to make queries about the document. Additionally, the application uses an open-source model (LLM) from HuggingFace and

Langchain to initialize a RAG pipeline. The hallucination caused by a typical LLM is lessened when RAG is implemented for this system.

LIMITATIONS

The application needs to be faster while generating a response due to the limited hardware resources available. This can be improved by increasing the number of GPUs being used to execute the LLM. Increasing the number of parameters

CONCLUSION

The usage of AI in the field of medicine can improve the standards of treatments being performed for patients and make doctors well-informed. This application would be helpful in identifying potential drugs being used for treatment or any new technique being implemented in surgeries.

Works Cited

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