Chatbot based on clinical literature for decision support

Motivation

- There is a large collection of clinical literature with the latest treatments and diagnostics, but keeping up to date of the latest techniques can be a difficult task due to their constant evolution.

- Large Language Models (LLM) on clinical practice guidelines (CPG) can be useful tools in the process of extraction relevant information, assessing scientific and clinical relevance of biomedical articles.

- In the healthcare field, the use of systems for decision support allows better diagnose patients according to their symptoms, and reduces the communication gap between patients and clinicians.

Our proposal

- Gather different LLMs to train them with CPG and high-quality biomedical literature, to analyze and compare their performance.

- Define metrics to analyze response time, resource consumption and feasibility to be integrated in actual healthcare systems of the LLM used.

- Use of LLMs to assess the evidence level for any new biomedical article according to scientific criteria.

- Provide personalized medicine and the latest clinical methods through real-time queries of the electronic health record (EHR) and the clinical corpus.

- Develop a chatbot that will be tested by both healthcare professionals and patients, to provide a real-time conversational system and provides the most appropriate medical answers.

Overview

Main challenges

- Complex text
- Unstructure data
- Spanish data

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