

CyberMed ChatBot

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Technical Documentation

CyberMed Chatbot: Cybermed Chatbot is a generative AI system that is directly connected to doctors forms. This chatbot can help direct duplication lab testing, allowing the doctor to instantly access the patient's medical records while assisting in decision making, Making a 3 way conversation possible with doctor and client to reduce preference misdiagnosis, and many more possible features.

Frontend: for the frontend we designed a mock clinical notation documentation, with our attached chatbot. The chatbot takes up a negligible percentage of the screen and is collapsible. This allows the doctor to proceed with a clinical appointment exactly as normal, but when tough concepts to explain or questions are raised, the doctor and patient can easily refer to the bot for a conversation.

Backend Application: for the backend design we used Pandas to query patient data, and format it accordingly. We used Python and Django interfaced with OpenAI to read patient records and prompt chatGPT. We routed our data via a local server to endpoints to communicate between the front and back end. This allows medical practitioners to enter identification IDs for patients and receive patient data.

List of Features and Functionalities

1. Current Functionalities and Features

- a. Generative AI Chatbot connected directly to the physician's patient report. The Bot is capable of but not limited to..
 - i. Catching and alerting physicians about duplication in laboratory and radiology testing within the same system.
 - ii. Ability for patients to gain clarity by asking chatbot questions that may seem simple to a doctor but not to someone in the medical field.
 - iii. Helps reduce preference misdiagnosis, by allowing clients to feel more informed about decision making.
 - iv. Assist doctors with finding medical records and, give information to doctors specific to their client, that might have been overseen or withheld.

2. Future Functionalities and Features

- a. Generative AI chatbot connected directly to all medical professional pages, that can assist with daily tasks, while not being an annoyance. These tasks might include but would not be limited too:
 - i. Participating in a 3-way conversation with client and the doctor to deliver solutions in technical english form to clients.
 - ii. Document creation
 - iii. Client specific information
 - iv. Let doctors or pharmacists find pills that function similarly and might react the best for the client based on their medical experiences.
 - v. Flagging for software issues, I.E. Duplicate records, time management skills, etc..
 - vi. Use videos and pictures to demonstrate procedures thoroughly to clients.
- b. Generative AI chatbot that can be brought home by patients in a limited access app form. This can assists patients with:
 - i. When patients have tough decisions to make, I.E. to do or to not to do surgery. The patient can use the app to talk more about the information the doctor gave them, with direct access to their history and stories similar to theses and how they turned out.
 - ii. Patients who are stubborn and do not like going to the doctors can consult an AI bot personalized to them that does not make decisions for them but provides information based on questions.