MediBot – Health Care Chatbot

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Introduction

The transition to modern medicine in healthcare has been sped using computer-generated analytics and electronic medical reporting to support clinical and administrative processes. The utilisation of specialised IT skills and resources is frequently required when attempting to get data from a big database. As a result, healthcare professionals frequently rely their decisions on their own perspectives or those of their colleagues. To identify linked patients, predict disease rates, and identify effective therapies, health practitioners may find it particularly helpful to employ an information retrieval system based on a QA model. Businesses, universities, and organisations can automate a variety of online and customer support tasks with chatbots. Quick responses are given to frequently requested questions by the client. A chatbot system that interacts with patients has been proposed. Patients are more likely to worry about their medications and other programmes they utilise because of their conditions. Instead of dialling an anonymous individual to receive a quick response, chatbots will be used. A chatbot is a piece of software that can communicate with and learn from people. For user input and output to and from chatbots, the great majority employ a graphical user interface (GUI) like that of a messenger. The chat bot comprehends and responds to user remarks.

Problem Statement

To develop a user-friendly and accessible conversational AI tool that can provide patients with easy and quick access to healthcare information and services. The chatbot should be able to use natural language processing and machine learning technologies to offer personalized recommendations based on patients' symptoms, medical history, and preferences.

It should also integrate with existing healthcare systems such as electronic health records to provide seamless access to patient information. The aim is to create an efficient and convenient way for patients to manage their health, given the increasing demand for healthcare services and the shortage of healthcare professionals.

Objective

- The Objective of this project is to develop a CHATBOT for Health Care Facilities which will allow the user to communicate between patients and health care professionals. These bots will be used to provide timely access to relevant healthcare information to the patient .As treatment compliance and awareness of patients' symptoms increase, chatbots will lessen the strain of healthcare workers by lowering hospital visits, unneeded treatments and procedures, and hospital admissions and readmissions. The users of this Chabot will be benefited by spending less time commuting to the doctor's office, less money spent on unnecessary treatments/tests and easy access to the doctor at the push of a button.

Proposed System

The proposed work aims to develop a system for automatic sentiment analysis of audio recordings. The system will utilize machine learning algorithms to classify the emotions conveyed in the audio files, which can include speech, music, and other sounds. The goal of this work is to provide a reliable and efficient method for extracting sentiment information from audio recordings, which can be useful in a variety of applications such as market research, customer service analysis, and sentiment monitoring in social media

To achieve this goal, we will first collect a large dataset of audio recordings that contain various emotions such as happiness, sadness, anger, fear, and neutral. We will then pre-process the data to extract relevant features that can be used for sentiment classification. This will involve techniques such as signal processing, feature extraction, and dimensionality reduction. Next, we will develop a machine learning model to classify the emotions in the audio recordings. In this project, we will use Convolutional Neural Networks (CNNs) for recognizing the input audio and determine the emotion that is being expressed through it.

Existing System

One of the currently used system was studied and following details about each one came out after analysis.

OneRemission

Problems Addressed: For cancer patients and cancer survivors, the app empowers them by providing a comprehensive list of diets, exercises, and post-cancer practices, curated by Integrative Medicine experts, so that they don't need to constantly rely on a doctor.

Advantages

Useful for cancer patients

Disadvantages:

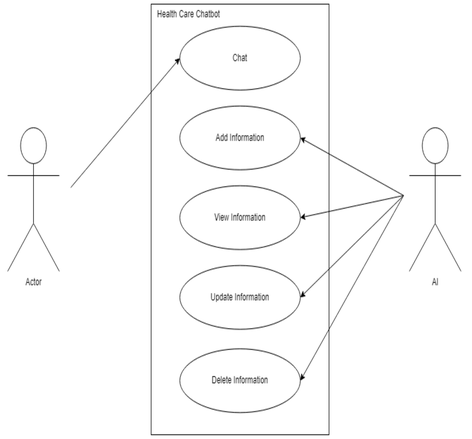
Only useful for cancer patients

Gaps Identified

Specially made for cancer patients

Reference link: https://medicalfuturist.com/top-12-health-chatbots/

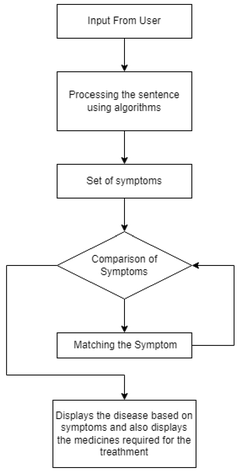
Methodology



A software development methodology in the context of software engineering is the division of software development work into discrete phases (or stages) containing tasks with the aim of improving planning and management. It is frequently regarded as a portion of the system development life cycle.

There are various approaches to software development.

We have decided to use agile development for this program. An iterative method of software development is known as an agile methodology. The agile software development method usually incorporates usable product feedback. It is a collection of approaches that exhibit a dedication to rapid feedback cycles and ongoing improvement. At every step of the project, agile teams within the company collaborate daily in person meetings. By working together and communicating, the process is maintained



Conclusion

Patients are never left unattended when using chatbots. They gain patients' trust by responding quickly and effectively. Undoubtedly, chatbots are beneficial. AI chatbots are particularly beneficial to the healthcare industry because they lighten workers' workloads. But setting expectations is a vital first step before implementing chatbots in the healthcare sector. Anyone who knows how to text in English language may utilize the Chatbot's mobile app or desktop version because it is so user-friendly. A medical chatbot offers individualized diagnosis in response to symptoms. For the medical chatbot to be able to manage all types of ailments, the efficiency of the chatbot can be increased by adding more word combinations and expanding the use of the database.