

SYNOPSIS

PROJECT REFERENCE NUMBER: 46S_BE_0331

TITLE OF THE PROJECT: "VOICE BASED E-DOCTOR CHATBOT FOR PHYSICALLY CHALLENGED PEOPLE".

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KEYWORDS:

Chabot, Healthcare, Artificial Intelligence and Machine Learning , Virtual Assistance , Natural Language Processing, Disease Prediction.

INTRODUCTION:

A voice-based e-doctor Chabot is a virtual assistant that uses natural language processing to communicate with users and provide them with medical advice. This type of chatbot can be particularly useful for physically challenged individuals who may have difficulty using traditional methods of accessing healthcare services. The chatbot can be accessed through a mobile application or web-based platform, and users can interact with it using voice commands .

The chatbot may ask the user questions about their symptoms, medical history, and other relevant information in order to provide personalized information. ChatGPT, a large language model developed by Open AI. I am based on the GPT-3.5 architecture, which is a state-of-the-art language model that uses deep learning algorithms to understand natural language and generate human-like responses to a wide range of queries . I am trained on a vast corpus of text data and can generate human-like

responses to a wide range of questions and prompts. My knowledge cutoff is up to 2021, which means I am aware of information and events that have occurred up to that year. However, I continue to learn and improve over time as I am fed with new data and information. An API key interface is a mechanism that allows users to securely access and interact with an API (Application Programming Interface).

An API key is a unique code or token that identifies a particular user or application, and it is used to authenticate and authorize access to the API. API key interfaces typically involve a series of steps, including registration, authentication, and authorization. Users must first register for an API key by providing their contact information and any other relevant details. Once registered, they will receive a unique API key that can be used to access the API. The benefits of a voice-based e-doctor chatbot for physically challenged individuals include increased accessibility to healthcare services, convenience, and the ability to receive medical advice from the comfort of their own home.

OBJECTIVES:

Design and Development of Chatbot Application for Suggesting Medical Consultation Especially for physically challenged people with voice Activation.

SCOPE Of PROJECT:

- Application uses English Language only.
- This Application Especially for blind people and Normal people can use.
- Serious long-term diseases should not be treated using Application.
- ChatGPT is used.

METHODOLOGY:

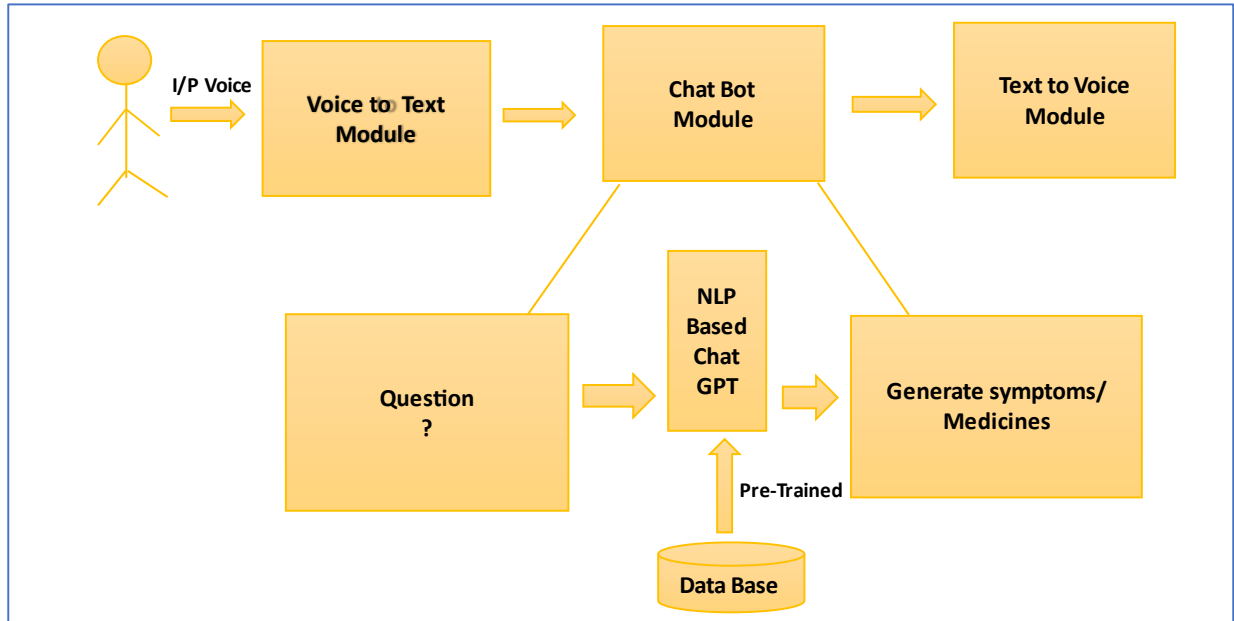


Fig 1:Block Diagram and Proposed E-Doctor Model

The Figure1 Illustrates the block diagram of E-doctor Model, which consists of four main stages: Voice to text module, Chatbot model, Output text, and Text to voice module. The proposed model uses awareness of health for physically challenged people don't know which diseases have which symptoms.

In this project chatbot application using Machine Learning Techniqueis utilized for prediction of diseases.

1.Chatbot Application

A chatbot is a computer program that simulates human conversation through voice commands or text chats or both.

A chatbot performs routine automated tasks based on specific triggers and algorithms, simulating human conversation. A bot is designed to interact with a human via a chat interface or voice messages in a web or mobile application, the same way a user would communicate with another person. Like virtual assistants, chatbots are form of conversation AI. Python is currently the most popular language for creating chatbot.

2.ChatGPT

ChatGPT is an artificial intelligence language model developed by OpenAI, based on the GPT-3.5 architecture. It has been trained on a massive amount of text data and can understand and generate human-like language responses to a wide range of prompts and questions. ChatGPT has been trained on a diverse range of topics, which means it can provide helpful responses on a wide range of subjects, from general knowledge to specific niche topics .

API keys are used to authenticate your requests to a web API. They allow you to access and interact with the API's resources by identifying you as an authorized user. To use an API key, you typically need to include it in the request headers or query parameters when you make a request to the API. The exact method for including the API key varies depending on the API and the programming language or framework you're using.

3.Speech Recognition:

3.1.Speech to Text Convert:

Speech-to-text, also known as automatic speech recognition (ASR), is the technology that enables computers to recognize and transcribe spoken language into text format. The technology works by analyzing the acoustic signal of human speech and converting it into written words.

The process of converting speech to text involves several stages. First, the audio signal is captured through a microphone or other input device. The signal is then digitized and analyzed to extract features such as pitch, volume, and spectral content. This feature extraction process helps the system to identify the phonemes, or individual sounds, that make up the spoken words

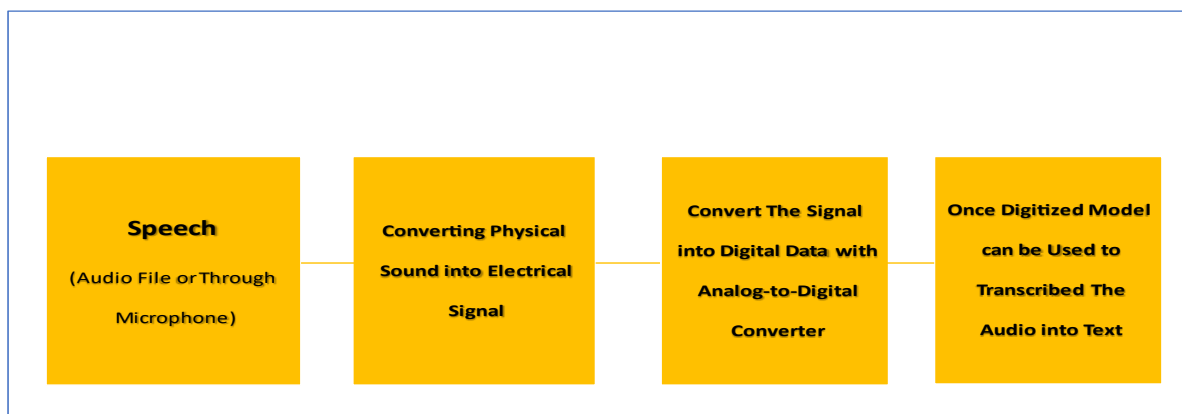


Figure 3.1 Speech To Text Convert

3.2 Text to Speech Convert:

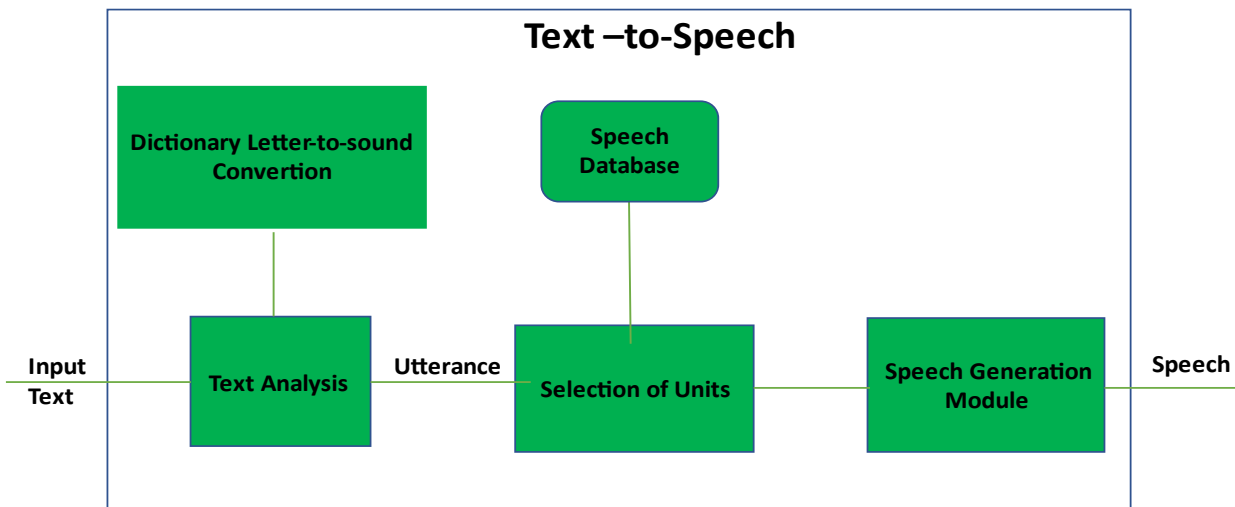


Fig 3.2 Text to Speech

Text to speech (TTS) is the process of converting written text into spoken words. This technology can be implemented using speech recognition and speech synthesis. Speech recognition technology is used to recognize written text and convert it into spoken words, while speech synthesis technology is used to generate the actual speech.

The process of converting written text into spoken words using TTS technology involves several steps. First, the written text is analyzed to determine the appropriate pronunciation of each word. This is done by applying rules of pronunciation and by referencing a database of words and their corresponding pronunciations.

There are a variety of programming languages and APIs that can be used to implement TTS technology. In JavaScript, the Web Speech API can be used to create TTS applications. The API includes a speech synthesis component that allows developers to generate spoken output from written text, as well as a speech recognition component that allows developers to recognize spoken input and convert it into written text.

CONCLUSION:

The implementation of a voice-based e-doctor chatbot for physically challenged people is a positive step towards improving healthcare access and outcomes for this population. The chatbot can provide a convenient and accessible way for physically challenged individuals to access healthcare information and advice, without having to physically visit a doctor's office.

The chatbot's ability to interact through voice commands makes it particularly useful for those with physical disabilities, such as limited mobility or visual impairments, who may have difficulty using traditional text-based interfaces. By providing a user-friendly and accessible interface, the chatbot can help bridge the healthcare accessibility gap for physically challenged individuals.

However, it is important to note that the chatbot is not a substitute for professional medical advice and care. The chatbot's responses should be considered as a supplement to, rather than a replacement for, professional medical advice and diagnosis.

Overall, the voice-based e-doctor chatbot has the potential to improve healthcare access and outcomes for physically challenged individuals, and it is a promising technology that should be further developed and refined to meet the unique needs of this population.

FUTURE SCOPE:

The development and implementation of a voice-based e-doctor using a chatbot for physically challenged people is a great step towards enhancing accessibility to healthcare services. However, there is still a lot of work that can be done to improve and expand this technology. Here are some potential future areas of work:

- **Integration with wearable devices:** Wearable devices such as smartwatches and fitness trackers are becoming increasingly popular. Integrating the voice-based e-doctor chatbot with these devices could provide more accurate health monitoring and recommendations.
- **Expansion of medical knowledge:** The chatbot's medical knowledge could be expanded to cover a wider range of health conditions and treatments. This would

require a significant investment in research and development, but would ultimately make the technology more useful to a larger population.

- **Personalization:** The chatbot's responses could be personalized based on the user's medical history, preferences, and lifestyle. This could enhance the user's experience and improve the chatbot's accuracy in providing relevant health advice.
- **Integration with telemedicine:** The chatbot could be integrated with telemedicine services to provide more comprehensive healthcare. This could include video consultations with healthcare professionals, online prescriptions, and appointment scheduling.
- **Language support:** The chatbot could be expanded to support multiple languages, making it accessible to a wider range of people.
- **Natural language processing:** Natural language processing technology could be used to improve the chatbot's ability to understand and interpret user requests and questions. This would enhance the user experience and make the chatbot more efficient in providing relevant health information.