Health Care Chatbot

A Project Work Synopsis

Submitted in the partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING
IN
COMPUTER SCIENCE WITH SPECIALIZATION IN
ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

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Abstract

The healthcare sector is very large. Patients see doctors for a variety of reasons, from seeking guidance on prescriptions to attending to urgent medical conditions. Healthcare chatbots are computer programs designed to simulate human conversation to assist users in managing their health and well-being. These chatbots leverage natural language processing (NLP) and artificial intelligence (AI) technologies to interpret user requests and provide relevant information and recommendations.

My ChatBot "HealthGenie" harness the power of ChatGPT which helps this virtual assistant to effectively understand and respond to a wide array of patient inquiries, provide personalized health information, and offer guidance on various medical topics.

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1. INTRODUCTION

1.1 Problem Definition

Project identification for a ChatGPT-powered healthcare chatbot entails identifying the demand for an intelligent conversational agent in the industry.

The goal is to create a chatbot that can give consumers looking for advice about healthcare personalised, correct, and easily accessible information. The chatbot can engage in natural language conversations, comprehend user inquiries, and provide pertinent responses by utilising ChatGPT's capabilities.

1.2 Problem Overview

The purpose of 'HealthGenie' a healthcare chatbot is to provide an AI assistant which would harness the power of ChatGPT and can effectively understand and respond to a wide array of patient inquiries, provide personalized health information, and offer guidance on various medical topics. The power of ChatGPT lies in its ability to comprehend context, interpret user intent, and generate relevant and coherent responses.

1.3 Hardware Specification

- A laptop with network connectivity

- 6GB Ram and compatible with software.

1.4 Software Specification

- VS Code

- Node.JS

- OpenAI API

2. PROBLEM FORMULATION

Even though a phone call or email might be considered as easy forms of communication with the professionals , they are not always the most effective.
There are several reasons why my health care chatbot is important, including:-

1. The main focus of my chatbot is to provide Personalized and Tailored Care. By using the power of ChatGPT it effectively understand and respond to a wide array of patient inquiries.

2. It can provide immediate support, cutting down on the amount of time it takes for a user to receive the information or direction they need.

3. Healthcare chatbots offer support and information that is available around-the-clock. Users don't need to make appointments in person or wait in queue to use the chatbot; they may access it anytime, from anywhere.

3. OBJECTIVES

Depending on the particular requirements and aims of the healthcare organization or application, the objectives of a chatbot for healthcare can change. However, the following are some typical objectives for healthcare chatbots:

- Provide 24/7 Access to Healthcare Information
- Assist in Symptom Triage and Self-Care
- Personalize Health Recommendations
- Improve Patient Engagement and Education
- Enhance Access to Mental Health Support
- Complement and Support Healthcare Providers

Healthcare chatbots can improve patient engagement, improve health outcomes, and boost healthcare delivery efficiency by being in line with these goals.

4. METHODOLOGY
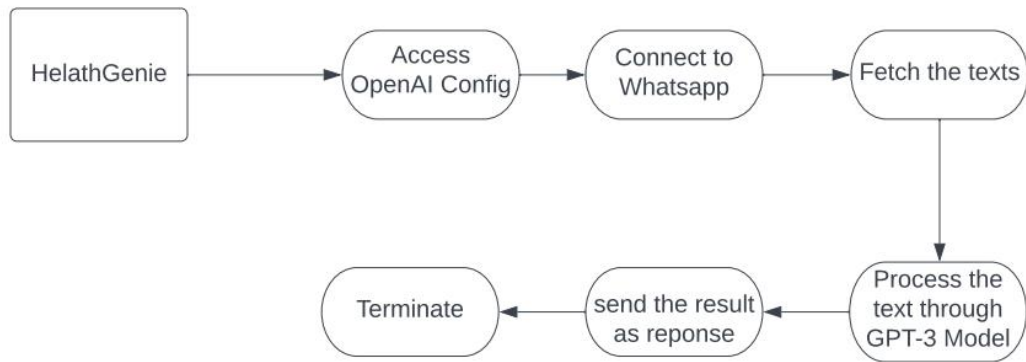
The above methodology is used for my chatbot "HealthGenie" .

5. EXPERIMENTAL SETUP

This project would be containing:

1. Logic & working of JavaScript: The API's would be connected and accessed using the embedded node js tool, which will enable us to run js in windows desktop environment. Using js helps a lot because it supports multitude of libraries and features which are not normally present in other languages like C and C++, python etc.

2. Prompt Engineering: Since the advent of Chat-GPT there is a new field of AI emerging and that is known as prompt engineering. Prompt engineering is the process of fine tuning the AI model and making sure that it gives the desired responses without any noise or unwanted data. This is one of the most crucial processes in making the bot work, as it needs to be very specific about the responses it gives.

3. WhatsApp API: We will be using the whatsapp.js api provided by the official WhatsApp company, which enables us to connect our phone with a desktop computer, we will be redirecting all the responses generated by chat-gpt API to the phone.

6.CONCLUSION

The goal of "HealthGenie," a healthcare chatbot, is to give an AI assistant that can successfully comprehend and respond to a wide range of patient enquiries, provide individualised health information, and offer assistance on various medical topics. It does this by utilising the ChatGPT platform. ChatGPT's strength rests in its capacity to perceive context, decipher user intent, and produce pertinent and Ill-thought-out solutions.

ChatGPT can help users prioritise their symptoms, offer initial advice for self-care, or decide whether it is more urgent to seek medical attention. Its extensive knowledge base enables it to provide trustworthy information about medications, treatments, and health issues, enabling consumers to make knowledgeable healthcare decisions.

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WEBSITES

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