

CHATBOT FOR DISEASE PREDICTION AND TREATMENTS

B. SURYANARAYANA MURTHY¹, KALAVA SYAM²¹ Assistant Professor MCA, DEPT, Dantuluri Narayana Raju College , Bhimavaram, Andhra PradeshEmail id:- suryanarayanamurthy.b@gmail.com² PG Student of MCA, Dantuluri Narayana Raju College , Bhimavaram, Andhra PradeshEmail id :- kalavasyam96659081@gmail.com**ABSTRACT**

Through chatbots one can communicate with text or voice interface and get reply through artificial intelligence. Typically, a chat bot will communicate with a real person. Chat bots are used in applications such as ecommerce customer service, call centres and Internet gaming. Chatbots are programs built to automatically engage with received messages. Chatbots can be programmed to respond the same way each time, to respond differently to messages containing certain keywords and even to use machine learning to adapt their responses to fit the situation. A developing number of hospitals, nursing homes, and even private centres, presently utilize online Chatbots for human services on their sites. These bots connect with potential patients visiting the site, helping them discover specialists, booking their appointments, and getting them access to the correct treatment. In any case, the utilization of artificial intelligence in an industry where individuals' lives could be in question, still starts misgivings in individuals. It brings up issues about whether the task mentioned above ought to be assigned to human staff.

1 INTRODUCTION

Since the past few decades, humans have been tirelessly working day in and day out that they fail to prioritize their health on a regular basis. In the longer run, this problem leads to jeopardizing the quality of life. Nevertheless, with the aid of Artificial Intelligence, we can now provide healthcare services to individuals at their convenience at reasonable prices. One of the biggest blessings we possess is a healthy body. A healthy body and enhanced quality of life is something each one of us looks up to. The primary focus of this paper is to provide these services to fulfill the abovementioned purpose. It is difficult to imagine our lives without high tech gadgets because they have become an essential part of our lives. Therefore, the field of Artificial Intelligence is prospering due to the various applications of

it in the research field. Disease prediction is one of the main goals of the researchers based on the facts of big data analysis which in turn improves the accuracy of risk classification based on the data of a large volume. [1] E-healthcare facilities in general, are a vital resource to developing countries but are often difficult to establish because of the lack of awareness and development of infrastructure.

The internet for clearing their healthcare-based queries. We have designed a platform for providing online medical services to patients with a goal to provide assistance to healthcare professionals. The user can also seek medical guidance in an easier way and get exposure to various diseases and diagnosis available for it. In order to make communication more effective, we have implemented a chatbot for disease prediction. Chatbots are the human version of software that is based on AI and uses Natural language processing (NLP) to interpret and accordingly respond to the user. This study proposes the disease prediction chatbot using the concepts of NLP and machine learning algorithms. The prediction is carried out using KNN and Decision tree algorithms. KNN and Decision tree are a few of the most used classification algorithms that are frequently used in disease prediction. It is assisted with the NLP driven chatbot. [2] The wordnet and tokenization concepts of NLP are used. The use of tokenization is to split the given text into a list of words whereas WordNet is a lexical database of dictionary designed for natural language processing. The study also focuses on the use of the Optical Character Recognition tool named Tesseract which is used to extract text from the patient's scanned pathology report. The generated text helps in translating the report in an easier manner by providing a graphical analysis of the test result.

2. LITERATURE SURVEY AND RELATED WORK

In the paper by Rashmi Dharwadkar [5], the working of a chatbot relies upon Natural language preparation that causes clients to advance their issues about actual wellbeing. The patient can ask his wellbeing- related issues/inquiries through the clinical chatbot, it isn't required to test the client/patient should mandatorily go to the medical clinic rather by utilizing Google API for text-voice or voice-text discussion. Chatbot gets the inquiry from the client and showcases the connected arrangement through an android app. The proposed idea of the paper "A novel approach for medical assistance using trained chatbot" by Divya Madhu [4] is to plan a model utilizing computerized reasoning eat encourages the client to perceive the certified treatment for sickness. There are a ton of medicines accessible for a specific illness and nobody can explicitly recommend the appropriate treatment and which is the best counterpart for that infection. In this proposed, man-made brainpower assumes a significant part by giving a record of accessible medicines dependent on the illness perceived through the side effects. The framework recommends the medications for illnesses and their rec repaired utilizes and causes the client to choose an appropriate treatment. This framework urges individuals to Ave a fundamental thought of their wellbeing and monitor their health status, accordingly encourages the client to take appropriate treatment. The proposed thought of the paper "A self-conclusion clinical chatbot utilizing man-made reasoning" by S.

3 EXISTING SYSTEM

In this project we are designing hospital systems where chatbot will accept symptoms from patient and then suggest doctor availability date and time for that symptoms. To send SMS to doctor we need to have mobile service provider without that this service will not work and you are asking to generate prescription by chatbot but we don't have diseases and related medicines to generate prescription so we are not doing this but chatbot will suggest doctor by taking symptoms from patients.

4 PROPOSED WORK AND ALGORITHM

A chat bot will communicate with a real person. Chat bots are used in applications such as ecommerce customer service, call centers and Internet gaming. Chatbots are programs built to automatically engage with received messages. Chatbots can be programmed to respond the same way each time, to respond differently to messages containing certain keywords and even to use machine learning to adapt their responses to fit the situation. A developing number of hospitals, nursing homes, and even private centers, presently utilize online Chatbots for human services on their sites.

5 METHODOLOGIES

MODULES

- This application consists of 4 modules
- New user Registration: Using this module users can sign up with the application.
- Login: Using this module user can login to application
- Chabot: Using this module users can interact with Chabot
- Logout: Using this module users can exit from the application

6 RESULTS AND DISCUSSION

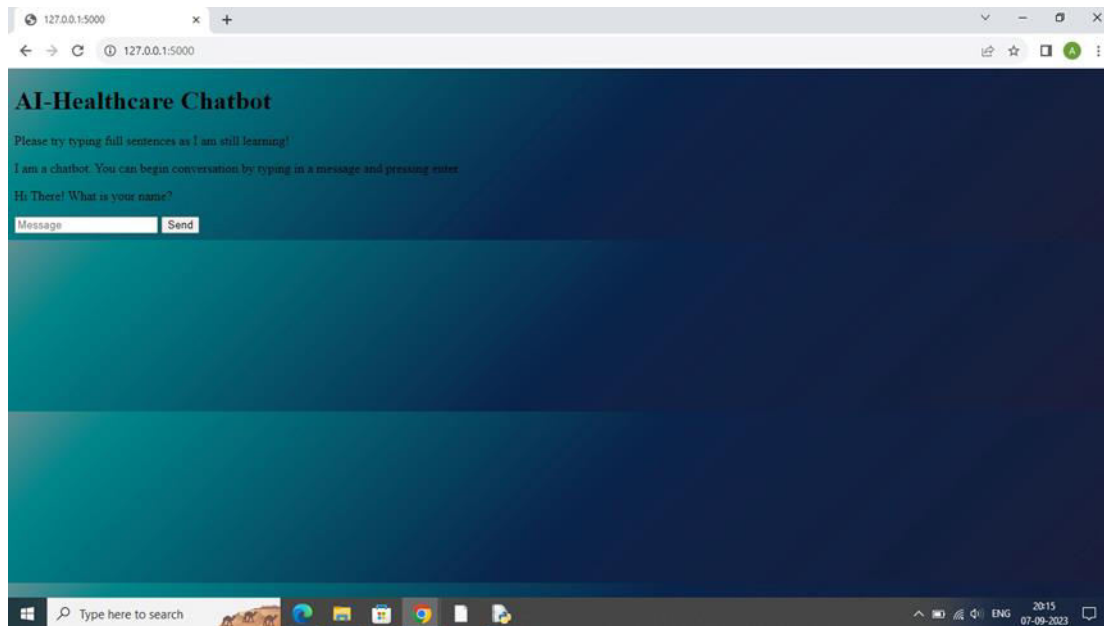


Fig 1:- AI Chatbot

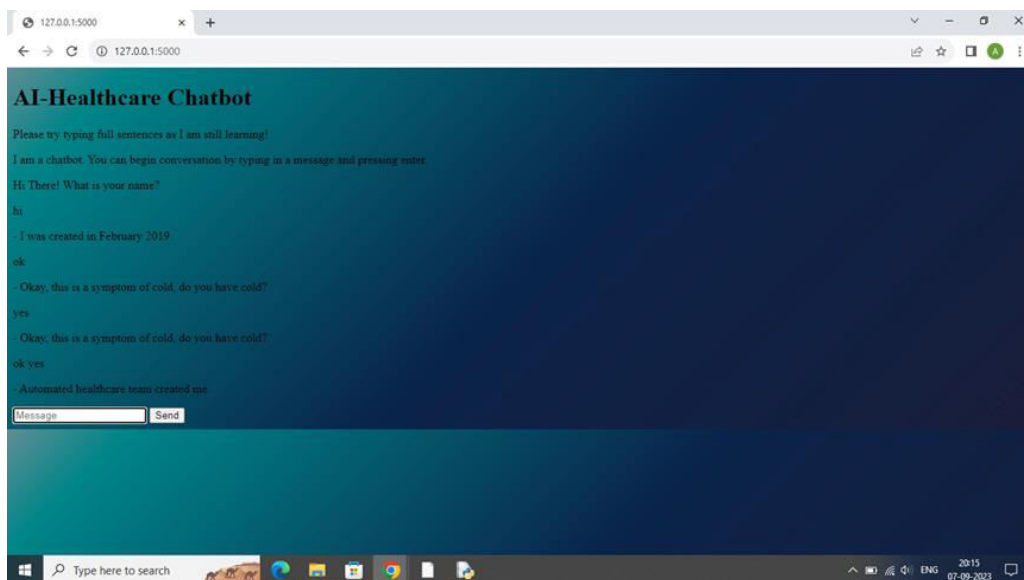


Fig 2:- AI chatbot asking questions according our problem

6. CONCLUSION AND FUTURE SCOPE

This work introduced the fundamentals of what chatbots are. It gave an overview about ideas, products and platforms, both, from the past and available today. The current interest in chatbots, potential use cases and limitations have been explored in detail. Different aspects of the implementation of a chatbot and working with conversational interfaces have been presented through the creation of an exemplary chatbot, which included interaction and user experience design, and a general, reusable software architecture for chatbots. While not all aspects can be covered within the context of this work, the goal was to give an overview about what chatbots are, their use cases and how to create them. This knowledge should help exploring further possibilities of chatbot usage and it should enable more developers to apply chatbots to new scenarios and thereby also improve human-machine interaction in general.

The future scope for chatbot-based disease prediction is promising, as these systems can provide accessible, convenient, and timely healthcare information and support. Here are some potential developments and directions for chatbot-based disease prediction:

Improved Accuracy: Chatbots will become more accurate in disease prediction through the integration of advanced AI and machine learning algorithms. They will continuously learn from a vast pool of data and refine their predictions.

Integration with Health Data: Chatbots will increasingly integrate with electronic health records (EHRs) and wearable devices to access real-time health data. This integration will provide more personalized predictions and recommendations.

Early Warning Systems: Chatbots could serve as early warning systems for certain diseases. By analyzing a user's health history and lifestyle data, they can identify risk factors and recommend preventive measures.

Remote Monitoring: Chatbots can assist in remote patient monitoring by regularly checking in with individuals managing chronic conditions. They can alert healthcare providers if there are concerning trends or deviations from the norm.

Population Health Management: Healthcare organizations can deploy chatbots to gather data on a larger scale, helping to identify disease outbreaks or trends within specific populations. This can be especially valuable for public health interventions.

Mental Health Support: Chatbots will expand their role in mental health, offering support, resources, and early intervention for conditions like depression and anxiety. They can also detect signs of distress and recommend professional help.

Telemedicine Integration: Chatbots can work seamlessly with telemedicine platforms to provide initial assessments and direct patients to the appropriate level of care, saving time and resources for both patients and healthcare providers.

Personalized Health Recommendations: Chatbots will provide more personalized health recommendations based on an individual's medical history, genetic predisposition, lifestyle, and preferences. These recommendations can include diet, exercise, medication reminders, and stress management techniques.

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