AN INTELLIGENT BOT FOR THE MEDICAL HEALTH DIAGNOSIS

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ABSTRACT

To lead a good and healthy life healthcare is extremely much important. It is very difficult to get the consultation with the doctor in case of any health issues. The proposed idea is to make a medical chatbot using AI which will diagnose the disease and supply basic details about the disease before consulting a doctor. to scale back the healthcare costs and improve accessibility to medical knowledge the medical chatbot is made. Few chatbots acts as reference books, which helps the patient find out about the illness and assists with improving their wellbeing. The user is able to do the important advantage of a chatbot only it can diagnose all quite disease and supply necessary information. A text-to-text diagnosis bot connects patients about their medical issues and gives a customized diagnosis to support their symptoms. Hence, people will have a thought about their health and have the proper protection.

I. INTRODUCTION

A prosperous society is when its ntire people are healthy. It is important to maintain the health if one wishes to be happy. Only a healthy body can have a healthy mind and it has a positive impact on the performance of people. Nowadays, people are less aware of their health. In their busy life, they forget to take suitable measures to maintain their health and are less aware of their health status. In the latest news by TOI, we can see that people give no importance to their health and find it time consuming to undergo check-ups at hospitals. The busy-scheduled life has got no place for health. Most people comprising the working section of the society claim that their hectic schedule gives them no time for periodic medical check-ups and that they disregard any uneasiness shown by their body until it is too severe.

Medical Chatbot has a high impact on the health culture of the state. It has improved reliability and is less prone to human errors. Today's people are more likely addicted to internet but they are not concerned about their personal health. They avoid hospital treatment for small issues which may become a major disease in future. This proposed idea solves this problem. This idea focuses on creating a chatbot which is free of cost and available throughout the day. The facts that the chatbot is free and can be accessed wherever the user is, be it their working environment, prompt the user to have it and use it. It saves the overhead involved in consulting specialized doctors.

II. OBJECTIVE

Robots and other forms of artificial intelligence are used in some sorts of medical applications. Chatbot Erica is developed in Netherlands for a dental practice. This online assistant is used to answer frequently asked questions of patients and visitors on the website .

III. PROBLEM STATEMENT:

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may become a major disease in future.This idea focuses on creating a chatbot which is free of cost and available throughout the day.

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IV. EXISTING SYSTEM

A conversational agent that interacts with users using natural language is called a chatbot. Many chatbots have been developed using text communication starting from ELIZA that simulates a psychotherapist to PARRY which simulates a paranoid patient. ELIZA is well known artificial therapist. The bot attempts to rephrase the questions of the client and responds on certain keywords. If no keyword is found ELIZA replies with fixed phrases to keep the conversation going. Medicine is a field in which help is critically needed.

DRAWBACKS:

The bot then asks the user a series of questions about their symptoms to diagnose the disease. It gives suggestions about the different symptoms to clarify the disease. Based on the reply from the user the accurate disease is found and it suggests the doctor who needs to be consulted in case of major disease.

V. PROPOSED SYSTEM:

In the proposed system the user dialogue is a linear design that proceeds from symptom extraction, to symptom mapping, where it identifies the corresponding symptom, then diagnosis the patient whether it's a major or minor disease and if it's a major one an appropriate doctor will be referred to the patient, the doctor details will be extracted from the database, the user will be identified by the login details which is stored in the database. Chatbots dialogue design is represented using finite state graph. In order to achieve an accurate diagnosis, the logic for state transitions are made, natural language generation templates were used, and system initiative to the user and get responses from the user. Our agent has three main conversational phases: collection of basic information, symptoms extraction, and diagnosis. Our bot starts off by asking about the users email and password for login and then enters a loop of symptom extraction states until it gets sufficient information for a diagnosis. Users have the option of entering the loop again to talk to the doctor about another set of symptoms after receiving their first diagnosis and another option is that the user can view their history of chats about what they have discussed.

ADVANTAGES:

- Reduce time

The accurate disease is identified and specified to the end user by the chatbot.

VI. SYSTEM ANALYSIS

APPLICATION OF SYNCHRONOUS TEXT-BASED DIALOGUE SYSTEMS IN MENTAL HEALTH INTERVENTIONS: SYSTEMATIC REVIEW

AUTHORS: Simon Oermann, Kathryn L McCabe, David N Milne, Rafael A Calvo1 **ABSTRACT:** Background Synchronous written conversations (or "chats") are becoming increasingly

popular as Web-based mental health interventions. Therefore, it is of utmost importance to evaluate and summarize the quality of these interventions. Objective The aim of this study was to review the current evidence for the feasibility and effectiveness of online one-on-one mental health interventions that use text-based synchronous chat. Methods A systematic search was conducted of the databases relevant to this area of research (Medical Literature Analysis and Retrieval System Online [MEDLINE], PsycINFO, Central, Scopus, EMBASE, Web of Science, IEEE, and ACM). There were no specific selection criteria relating to the participant group. Studies were included if they reported interventions with individual text-based synchronous conversations (ie, chat or text messaging) and a psychological outcome measure. Results A total of 24 articles were included in this review. Interventions included a wide range of mental health targets (eg, anxiety, distress, depression, eating disorders, and addiction) and intervention design. Overall, compared with the waitlist (WL) condition, studies showed significant and sustained improvements in mental health outcomes following synchronous text-based intervention, and post treatment improvement equivalent but not superior to treatment as usual (TAU) (eg, face-to-face and telephone counseling). Conclusions Feasibility studies indicate substantial innovation in this area of mental health intervention with studies utilizing trained volunteers and chatbot technologies to deliver interventions. While studies of efficacy show positive post-intervention gains, further research is needed to determine whether time requirements for this mode of intervention are feasible in clinical practice.

A Novel Approach for Medical Assistance Using Trained Chatbot AUTHORS: Divya Madhu, Neeraj Jain C. J, Elmy Sebastain, Shinoy Shaji, Anandhu Ajayakumar

ABSTRACT: There are lot of treatments that are available for various diseases. No human can possibly know about all the medicines and the diseases. So, the problem is that there isn't any place where anyone can have the details of the diseases or the medicines. What if there is a place where you can find your health problem just by entering symptoms or just scanning an ECG or you can check whether the prescribed medicine is supposed to be used the way you are told to. Then it will help us to deduce the problem and to verify the solution. The proposed idea is to create a system with artificial intelligence that can meet the requirements. The AI can predict the diseases based on the symptoms and give the list of available treatments. The System can also give the composition of the medicines and their prescribed uses. It helps them to take the correct treatment. Hence the people can have an idea about their health and can have the right protection.

Designing a Chatbot for Diabetic Patients

AUTHORS: Abbas Saliimi Lokman, Jasni Mohamad Zain, Fakulti Sistem Koputer, **ABSTRACT:** Artificial Intelligence chatbot is a technology that makes interaction between man and machine possible by using natural language. In this paper, we proposed an architectural design of a chatbot that will function as virtual diabetes physician/doctor. This chatbot will allow

diabetic patients to have a diabetes control/management advice without the need to go to the hospital. A general history of a chatbot, a brief description of each chatbots is discussed. We proposed the design of a new technique that will be implemented in this chatbot as the key component to function as diabetes physician. Using this design, chatbot will remember the conversation path through parameter called Vpath. Vpath will allow chatbot to gives a response that is mostly suitable for the whole conversation as it specifically designed to be a virtual diabetes physician.

Conditional Entropy Based Retrieval Medellin Patient-Carer Conversational Case

AUTHORS: Pavlidou Meropi, Antonis S. Billis, Nicolas D. Hasanagas, Charalambos Bratsas

ABSTRACT: Bot Assistants can be an efficient and low-cost solution to Patient Care. One important aspect of Assistant Bots is successful Communication and Socialization with the patient. A new Conditional Entropy Retrieval Based model is proposed and also an Attitude Modeling based on Popitz Powers. The algorithm successfully retrieves the suitable answer with a high success rate in the patient-Bot Assistant dialogue interaction. Moreover, the Conditional Entropy Model and the Popitz Attitude Model are combined in order to identify
Attitude Changes in Dialogue Interactions between patients and doctors.

Pharmabot: A Pediatric Generic Medicin Consultant Chatbot AUTHORS: Benilda l leonor V. Comendador, Bien Michael B. Francisco Jefferson S. Medenilla

ABSTRACT: The paper introduces a Pharmabot: A Pediatric Generic Medicine Consultant Chatbot. It is a conversational chatbot that is designed to prescribe, suggest and give information on generic medicines for children. The study introduces a computer application that act as a medicine consultant for the patients or parents who are confused with the generic medicines. The researchers use Left and Right Parsing Algorithm in their study to come up with the desired result.

VII. SYSTEM DESIGN

Flow Chart

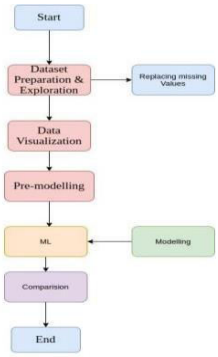


Fig : Flow chart of Self Diagnosing Health care ChatBot Using ML

VIII. MODULES:

- Create Dataset
- Create Flask Object
- Create Chatbot
- Train Chatbot
- Enter Message
- User Send Message
- Receive Response from Bot

IX. RESULTS

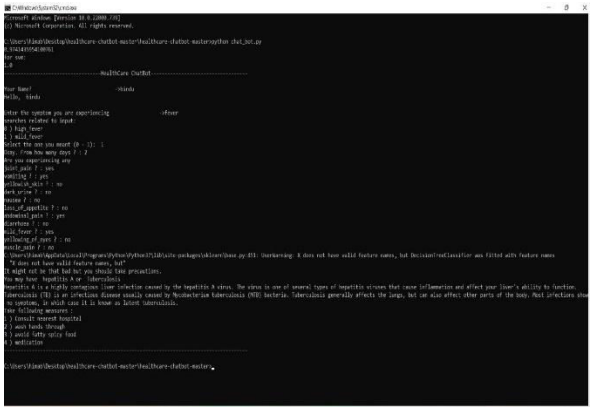
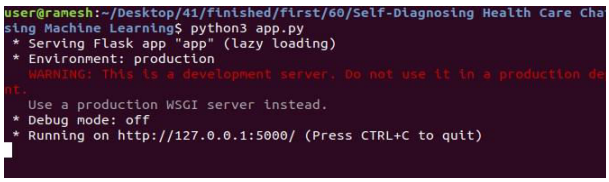


Fig : Execution of Self diagnosis health care in command prompt

Localhost



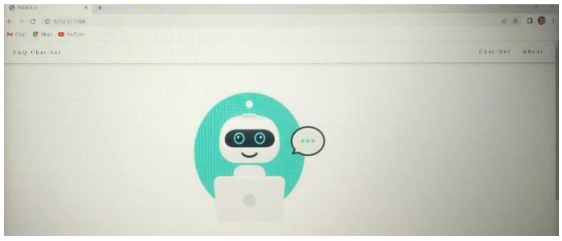


Fig : Health care ChatBot of the Local host

About the site

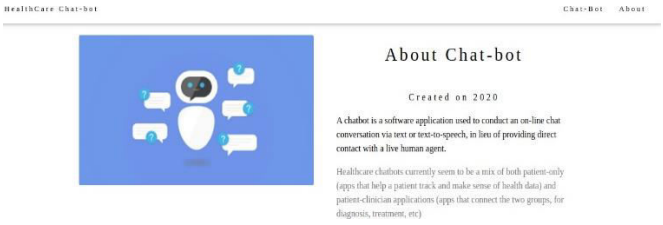


Fig : Conversation in ChatBot

X. CONCLUSION

From the survey of different papers, it is presumed that, the use of Chatbot is easy to understand and can be utilized by any individual who realizes how to type in their own language in portable application or work area rendition. A clinical chatbot gives customized analyze dependent on side effects. Later on, the bot's side effect acknowledgment and determination execution could be significantly improved by including support for increasingly clinical highlights, for example, area, span, and force of indications, and progressively definite side effect depiction. The usage of Personalized Medical collaborator intensely depends on AI calculations just as the preparation information. Finally, the execution of customized medication would effectively spare numerous lives and make a clinical mindfulness among the individuals.

XI. FUTURE SCOPE

As said previously, the future time is the time of informing application since individuals going to invest more energy in informing application than some other applications. Subsequently clinical chatbot has wide and immense future extension. Regardless of how far individuals are, they can have this clinical discussion. The

main prerequisite they need is a straightforward work area or cell phone with web association. The productive of the chatbot can be improved by including more blend of words and expanding the utilization of database so that of the clinical Chabot could deal with all kind of sicknesses. Indeed, even voice discussion can be included the framework to make it all the simpler to utilize.

XII. REFERENCES

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