Chatbot for Health Advices using Machine Learning

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Abstract—To lead an honest and healthy life healthcare is extremely much important. It's extremely difficult to urgethe consultation with the doctor just in case of any health issues. The proposed idea is to make a medical Chabot using AI which may 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 Chabot is made. Few Chabot acts as reference books, which helps the patient determine about the illness and assists with improving their wellbeing. The user is during a position to undertake to the important advantage of a Chabot only it can diagnose all quite disease and supply necessary information. Hence, people will have athough tabout their healt hand have the proper protection.

Keywords—Medical bot -chatbot– Health care- Machine learning- major or minor disease- doctor details.

I. INTRODUCTION

A prosperous society is when its entire 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. Now adays, 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 Chabot 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 Chabot which is free of cost and available throughout the day. The facts that the Chabot 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. LITERATURESURVEY

1.Pediametric Generic Medicine Consultant Chabot
A Pedia metric Generic Medicine Consultant Chabot. It is a conversational Chabot 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.

2. Ontology Based Chatbot

Mainly concerned with providing user the total control over the search result on the website. This Chabot helps the user by mapping relationship of the various entities require by the user, thus providing detailed and accurate information there by overcoming the draw backs of traditional Chabot. This gives a proposed approach a number of unique scalability and inter operability properties that are going to be evaluated in future phases. In on Bot, the ontology should be mapped first in to relational databases automatically to form its knowledge base. Users can interact with on bot easily using their natural language so there is no more need to learn any query language or to know about the contents of the underlying ontology

3. Climebot: an Argumentation Agent for Climate Change

They used this bot to get the updated weather changes quickly. While climate experts have agreed that global warming is real, this consensus has not reached all the society levels.Our aim is to develop a conversational agent able to explain issues related to global warming. The developed Chabot relies on text ualentailment to identify the best answer for a statement conveyed by a human agent.

4. Railbot: Railway (Irctc)Catbot

A Chabot which can be used to get some basic information related to Railway such as PNR, train status and seat availability etc. It saves the time of the user as they can directly fetch the information while conversing with the Chabot using text or voice in the above mentioned deployed methods. This is new proposed system will help the common passengers and visually impaired people, The Chabot will also enable the user to get the response of small talks. Railway(PNR,Trainstatus,seatavailability) by using a RAILBOT.

5. Chatbot for College Management System using AI

AI based Chabot provides an inter active what to communicate with students regarding their queries related to college information's like college address, code admission details, class timetable, exam schedules, seat allotment, subjects, notice details, result alert and also placement are in putted in the system.

6. Chatbot for University Related Frequently Asked Question

FAQs using Artificial Intelligence markup and Latent Semantic Analysis . Template based and general questions like welcome/ greetings and general questions will be responded using AIM Land other service based questions uses LSA to provide responses at any time that will serve user satisfaction. This Chabot can beu sed by any University to answer FAQs to curious students in an interactive fashion.

7. A Chatbot for Psychiatric Counselling in Mental Healthcare Service based on Emotional Dialogue Analysis and Sentence Generation

There are early studies to attempt users for psychiatric counseling with Chabot. They lead to changes in drinking habit based on intervention approach via chatbot. The application does not consider the user's psychiatric status through the conversations, continuous user monitoring, and ethical Judgment in the intervention. The Chabot assists psychiatric counseling in dialogues. The service communicates with a user through dialogues and conducts psychiatric counseling. The techniques enable continuous observation of user's emotional changes sensitively.

8.An E-Bussiness ChatbotusingAIML and LSA

The e-business has completely changed the way of selling products. E-commerce is one of the e-business models which mostly do business over the internet. In every e-business model, customers have to wait for a long time to get response from the customer service representative. As a solution to this problem, we proposed a Chabot

which automatically gives immediate responses to the users based on the data set of Frequently Answered Questions (FAQs), using Artificial Intelligence Markup Language (AIML) and Latent Semantic Analysis(LSA).

9. Implementation of chat bot for ITSM application using IBM WATSON

In the current scenario, the end user of Information Technology Service Management(ITSM) application in software companies has to keep on searching the solution for problem she is facing or else finally generate a tickets in cehe cannot collaborate with the system by asking questions and getting relevant answers. The Chabot makes decisions itself to answer user's query with the help of the IBM Watson Conversation APIs. It will also remember the context of the conversation and perform tasks such as creation of ticket on behalf of the user. In this model, we proposed a Chabot system using IBM Watson Conversation API and improve the experience of software firm's employees. Collaborate with the system by asking questions and getting relevant answers. The Chabot makes decisions it to answer user's query with the help of the IBM Watson Conversation APIs. It will also remember the context of the conversation and perform tasks such as creation of ticket on behalf of the user. In this model, we proposed a Chabot system using IBM Watson Conversation API and improve the experience of software firm's employees. Collaborate with the system by asking questions and getting relevant answers. The Chabot makes decisions it to answer user's query with the help of the IBM Watson Conversation APIs. It will also remember the context of the conversation and perform tasks such as creation of ticket on behalf of the user. In this model, we proposed a Chabot system using IBM Watson Conversation API and improve the experience of software firm's employees.

10. Designing a CHATBOT for Diabetic patients

In this paper, we proposed an architectural design of a Chabot that will function as virtual diabetes physician/doctor. This Chabot will allow diabetic patients to have a diabetes control/ management advice without the need to go to the hospital. A general history of a Chabot, a brief description of each Chabot's is discussed. We proposed the design of a new technique that will be implemented in this Chabot as the key component to function as diabetes physician.

III. PROPOSED SYSTEM

The chat-bot can answer to the users based on their disease related queries based on symptoms, causes, and prevention or medicine suggestion where it identifies the corresponding symptom then diagnosis the disease. If check whether it is a major or minor disease and if it is minor Chabot gives the prevention. Suppose, it is a major display the doctor details the patient will be referred it, the doctor details will be extracted from the database, the user will be identified by the login details which is stored within the database.

IV. EXISTING SYSTEM

Nationally, Medical attention was missing within the case of nearly one-third of all deaths. it's likely that the majority of these deaths warranted some quite medical attention, which such attention would are provided if the households during which these deaths happened were as rich because the top 15%.

V. SYSTEM ARCHITECTURE

Proposed system architecture. User can ask Query to our Chatbot in Telegram. The Query May be text or audio. The query can be check the Symptoms using the ML. The Symptoms majoror minor. It is a minor bot replied and gives the prevention and causes. Suppose, it is a major get the details from the database (Firebase) and display the output to the user. Fig 5.1

VI. DIALOG FLOW

Dialog flow is an end-to-end, build-once deploy-everywhere development suite for creating conversational interfaces for websites, mobile applications, popular messaging platforms, and IOT devices. We can use it to

build interfaces (suchas Chabot and conversational IVR) that enable natural and rich interactions between users and business. Dialog flow Enterprise Edition users have access to Google Cloud Support and a service level agreement(SLA) for production deployments.
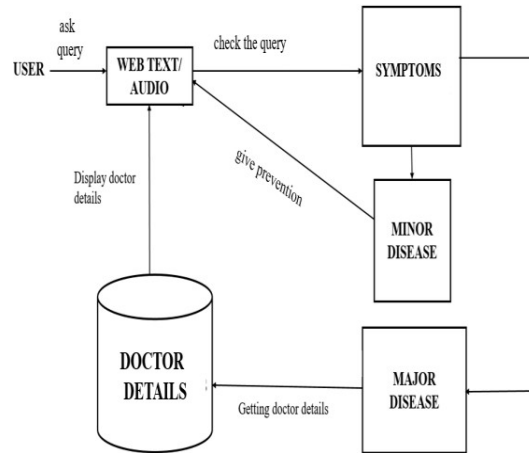

Figure 5.1. System Architecture

Chabot : A chabotisan Artificial Intelligence powered program that can answer questions automatically. The main purpose is to engage customers and collect valuable information.

VII. Modules and Descriptions

1. Creating an Agent

A Dialog flow agent is a virtual agent that handles conversations with your end-users. It is a natural language understanding module that understands the nuances of human language. Dialog flow translate send-user text or audio during a conversation to structured data that your apps and services can understand. You design and build a Dialog flow agent to handle the types of conversations required for your system.

*(i) Prebuiltagents:-*Prebuilt agents are a collection of agents provided by Dialog flow for common use cases. These agents can be used to establish a base for building conversations ford in ingout, hotel booking, navigation, etc.

(ii) Smalltalk:- Small talk is used to provide responses to casual conversation.This feature can greatly improve the end-user experience by answering common questions outside the scope of your agent.

*(iii)Multi lingual agents:-*Dialog flow supports many languages. For the complete list, see the languages reference page. The language you choose when creating an agent is set as the default language, and you can add additional languages.

2. Creating Intents

Intents are basic building blocks of Chabot in Dialog flow. Intents map user input to responses. Dialog flow provides two default intents 'Default Welcome Intent' and 'Default Fallback Intent' for each agent you create**.**

(i) Default Welcome Intent:- Default Welcome Intent is automatically configured with various training Phrases and responses.

(ii) *Rich Responses:-* In Dialog flow there are multiple types ofresponses not just simple Text Response.

3. Create an Entity

Entity is used to identify and extract specific data from end-user expression. Each intent parameter has a type, called the entity type, which indicates exactly how data from an end-user expression is extracted.

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4. Set a Context

Dialog flow contexts are similar to natural language context. If a person says to you "they are orange", you need context in order to understand what they are referring to.

5. Enabling Fulfillment

When you enable fulfillment for intent, Dialog flow responds to that intent by calling a service that you define. Each intent will have a setting to enable fulfillment.

6. Integration

Integrated with Social Network: Each integration handles end-user interactions in a Platform-specific way.

(i) Connect a ChatbotonTelegram:- Dialog flow integrates with many popular conversation platforms like Google Assistant, Telegram, and Facebook Messenger. If you want to build an agent for one of these platforms, you should use one of them any integrations options. Directend- user interactions are handled for you, so you can focus on building your agent.

(ii) Setting up Dialog flow:- In Dialog flow, go to Integrations in the left hand menu

   Click on the Telegram tile
   Paste the Access Token into the related field
   Click the Start button

(iii) CreatingaToken:- Login to Telegram and go to https://telegram.me/botfather

   Click the Start button in the web inter face or type/ start
   Click on or type/ new bot and enter a name Enter a user name for the bot, ending in
   "bot" (e.g.medical_bot)
   Copy the generated access to ken

(iv) Testing:- Bot Father will provide a link to your bot Once you've completed these tup.

   Go to this link to test out your agent

7. TrainingProcess

Since Dialog flow's natural language processing is based on machine learning, you can add training data that the agent learns from and uses to improve its performance**.**

VIII. CONCLUSION

It concluded that, the usage of Chabot issuer friendly and may be employed by a person who knows the way to type in their own language in mobile app or desktop version. A medical Chabot provides personalized diagnoses supported symptoms. Thus medical Chabot has wide and vast future scope. Regardless of how far people are, they will have this medical conversation. The sole requirement they have may be a simple desktop or smart phone with internet connection. The efficient of the Chabot are often improved by adding more combination of words and increasing the utilization of data base in order that of the medical Chabot could handle all sort of diseases. Even voice conversation are often added within the system to form it less difficult to use.

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