Artificial Intelligence Healthcare Chatbot System

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Abstract- Artificial Intelligence Healthcare Chatbot is a web based application which is used to communicate with text or voice interface and with the help of artificial intelligence it gives response. Chatbot uses natural language toolkit for query processing and it is built on the basis of artificial intelligence, machine learning and deep learning. Chatbot is the best example of human conversation with the machine. This Chatbot communicate with a real person. Chatbot helps patients visiting the site, booking their appointments, and getting them access to the correct treatment. Many People treated with the help of guidance provided by the chatbot by only sitting at home. This saves lot of time of patients and healthcare workers and also helps doctor to focus more on emergency cases. The usage of chatbot is uer friendly and can be use by any person.

Keywords- Artificial Intelligence, Machine Learning, Chatbot, Healthcare services, web application

I. INTRODUCTION

The chatbot is also known as chatter robots, are software agents that simulate human conversation through text or voice messages. Chatbots are use to communicate with text or voice interface and get reply through artificial intelligence. The future generation is of the messaging app because people are going to spend more time on messaging app than any other apps, so these medical chatbot has a wide and vast future scope. A chat bot is used to communicate with a real person. Chat bots are used in applications such as mobile services, call centres, gaming ,chatting, healthcare industry and ecommerce services,etc Chatbots can be programmed to respond differently to messages containing certain keywords and it uses machine learning to adapt their responses and provides answers of the queries asked by the patients . Daily increasing number of hospitals, nursing homes, and even private centers, presently utilize online Chatbots for human services on their sites. These bots connect with lots of people living in remote areas and help them to provide guidance of specialist doctor virtually. Chatbot helps patients visiting the site, booking their appointments, and getting them access to the correct treatment. Artificial intelligence utilize an industry where individuals' lives could be in question, still starts misgivings in individuals. Artificial intelligence healthcare chatbot system will help hospitals to provide healthcare support online

24 hours, it answers deep as possible as by using machine learning. This Chatbot asks the questions in series it helps patients by guiding what exactly he/she is looking for.AI medical chatbot provides personalized diagnoses based on symptoms. Chatbot collect information from patients, and then, based on the input, it provide patients with more information about their conditions and suggest the next steps.

II. LITERATURE REVIEW

Chatbot will act as a virtual doctor for the patients.. Natural language processing and pattern matching algorithm for development of this chatbot system. It is developed using the python Language. Based on the survey given it is found that the number of correct answer given by the chatbot is 80% and incorrect/ambiguous answer given is 20%. From this survey of chatbot and examination of result proposed that this software can be used for teaching and as a virtual doctor for recognition and main healthcare . Chatbots are usually used to engage conversation between both human and machine. The user feeds some knowledge to the machine so that machine can identify the sentences and taking a decision itself as a response to answer a question. It can neglect in describing a sentence and how to the response it whereas linking chat request to the database. So knowledge demonstration and function of SQL in the pattern-matching operation are needed.The deliberation by the chat-bots would be verified back to the fundamental model. It is done so that it can add some knowledge to the database as it has not been formed before. If in case the input sentences in the database did not match then it will be reformed . So far, chat-bots is been applied in health education, diagnostics and mental health. A survey of conversational agents from 40 articles outlines chat-bot taxonomy, specifies the main challenges and defines the types and contexts related to chat-bots in health . For instance, chat-bots can provide instant responses to health-related enquiries from patients while looking for specific patterns of symptoms in predicting disease, as presented by the internet-based Doc-Bot delivered via mobile phone or a Messenger-based chat-bot for outpatient and translational medicine .While this technology is still in its developmental stage, health chat-bots could potentially increase access to healthcare, improve doctor–patientand clinic–patient communication, or help to manage the increasing demand for

health services such as via remote testing, medication adherence observing or teleconsultations.

III. METHODOLOGY

Proposed system

Proposed system is composed of two entity namely, Admin and User.Admin first should login with their valid login credentials in order to access the web application.After successful login, admin can access all the modules and manage each task accurately.Admin can perform task such as Admin can login, admin can arrange questions and answers. Admin can also view the users and can update hospital details and available doctors' details.User need to register to get credentials, can view the webpage, View hospital details.User can also view available doctors and user can chat with bot regarding the query.

IV. MODELING AND ANALYSIS

AI chatbot allows unregistered users to register on the application and save their details to the database. After registration users will be able to login. The chat bot must allow users to view the homepage, View hospital details. Patients can also view available doctors and user can chat with bot regarding the query. The Chat bot will assist users with their queries and carry out appropriate actions such as scheduling appointments with the doctors. The AI chat bot should be able to maintain the conversational state when the context may be unclear through previous messages and conversations. Chatbot provide text responses and guide the patients.User query is process in Artificial Healthcare Chatbot system database. If the relevant data found then gives feedback to user. In proposed data flow diagram user request for the query, the system accept the query then the database check availability of the answer for the query. Database process the query and then it shows response to the user.

V. RESULT AND DISCUSSION

Chatbot solves the patient queries. It helps the petients to book their appointment with expert doctors if necessary. This application can be used by user's who can sit at home and chat with the bot for health solutions. Our system work properly.It save time and money.Chatbot helps to generate new leads. It guide users about their health. It provides support 24*7. Chatbot helps in gaining the trust of patients. It is easily accessible.

Limitation Of System

Limitationof system are as follows:
- It is mandatory that user need to put correct data or else it behaves abnormally.
-Wrong provision of medical data.
-Lack of face to face interaction
-User privacy Vulnerabilities

VI. CONCLUSION

It is concluded that chatbot usage is growing rapidly in medical industry. In future chatbot is available in every industry sector including healthcare. They will keep on solving common issues, help people to get support and communication, solve their medical problems and accessing the data, making good health care decisions and provide the good health services and make decisions on more complex undertakings. Nowadays, we observe that the spread of the chat system framework is worldwide and this growth is not going to stop. As technology and social connectivity improve, health care chatbots will soon become a single voice to solve people needs. We know that every task is never said to be perfect in this development field even more improvement may be possible in this application. We learned a lot of things and gained a lot of knowledge about development field. At the end, the implementation of customized medicine would successfully save many lives and create a medical awareness among people.

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