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Health Waves using Artificial Intelligence

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ABSTRACT: With increasing population of India, increasing birth rate and decreasing death rate due to advancement in the medical field it's found that numbers of doctors are less to serve the need of the increasing population. This scenario can be better understood while walking through the cities government hospitals where the less availability of the doctors is the major cause behind the improper treatment of the patients and in certain scenario the resultant death. Sometime even doctors can make mistake in providing the correct treatment result in death of patient. To encounter such cases there is a need of the smart and Intelligent chatbot who can provide advice to the doctors and sometime even patients about what to do in such cases which ultimately results in the saving the life of hundreds of people. The Al based medical chatbot on which this research topic is based deals with providing medical advice in such scenario because sometime doctors can even make mistake while observing the symptoms but the machine which is specifically developed for it can't make such mistake. This Al based medical chatbot can take decision as per the request of the patient. For this it uses its own database and in certain scenario where something isn't available in its database as per the request of the user, it collect the information from the search engine like Google and give it to the user in the Audio format like Google does. Thus doctors have injected more potassium in his body result in spreading of the cramp toward his heart and ultimate death. There is even lot more cases where even doctors can have made mistake. Thus to avoid such scenario there is the need of medical chatbot who can guide the doctors about what to do in such critical cases. Its application is not only limited till the doctors but they can also be utilized by the normal human being as in the case of emergency where It can guide the user about the primary treatments which should be taken by the person under treatment.

I. INTRODUCTION

Chatbots are the computer program which gives interview sessions with the patient the doctor via message , and videos by Al move over through this the patient can book appointment in the chatbot itself while or after communication It may be much time than the virtual Assistant used by the website organization as it provide the point solution for the emergency demand of healthcare Artificial Intelligence is being used nowadays in all the applicant of life style of every human life here Artificial Intelligence is used for the perfect solution by using machine learning algorithms and software human conversation on the analysis of health care data this is very much required for today and future requirements of advanced level disease and cure methods Al applications in the Healthcare is to analysis the correlated relationship between prevention can treatment techniques and treatment from patients as Al is Healthcare is new then are several ethical concerns also to its practice which is privacy automation and resources which can be delayed further in due cause by Health wave this particular chatbot of healthwave from the following process of login and registration is compulsory only then the meet activity of the chatbot will start in which are patient can chat with the doctor Al technology In Healthcare solution healthwave is the ability to gather data process it and used give a well defined at point to a patient by virtual Assistant to human and then Human to Human communications. Finally, It can provide a solution through machine learning algorithms and deep learning's. The aim of Healthwaves is to analysis relationships between prevention and treatment techniques and the patient's outcomes.

II. RELATED WORKS

1. **Smart Answering Chatbot based on OCR and Over generating Transformations and Ranking S. Jayalakshmi, Dr.Ananthi Sheshasaayee 978-1-5090-5960-7/17 2017 IEEE 2017 An automated answering Chatbot.**

A chatter bot or Chatbot aims to make a conversation between both human and machine. The machine has been embedded knowledge to identify the sentences and making a decision itself as response to answer a question. The response principle is matching the input sentence from user. The present technical project consist of developing an expert System for college enquiry desk using an android based Chabot, through Artificial Intelligence technology and virtual assistance (Human-machine conversation),transmitting natural language to a server.

2.   **Artificial Intelligence Technologies for Personnel Learning Management Systems 2016 IEEE 8th International Conference on Intelligent Systems At: Sofia, Bulgaria Nayden Valkov Nenkov, Yuriy Dyachenko,Katerina Koeva.**

An essential part of modern education is computing. Learning management systems are introduced as an intermediary between a student and a teacher. This paradigm is shifted through reproduction of teacher's and student's intelligent procedures by intelligent agents- The Artificial Intelligence technologies are based on reproduction of principles of human intelligence. Functioning of general Artificial Intelligence is based on principle of double contingency and is impossible without the acquisition of elements of self consciousness and self-cultivation that can be embodied in Artificial Neural Network. On its basis it is proposed to make Intelligent agents on platform IBM Bluemix with IBM Watson technology. These agents in the form of chatbots have to automate the interaction between the student and the teacher within the frames of Moodle learning management system.

3.   **Artificial Intelligence (Al) Chatbot as Language Learning Medium: An inquiry Nuria Haristiani Japanese Language Education Department, Universitas Pendidikan Indonesia, Jl. Dr. Setiabudhi 229, Bandung, Indonesia.**

In facing industry revolution 4.0, utilizing advanced information and computer technology in educational environment is crucial. One of the advanced computation technologies that can be used for learning, especially language learning, is chatbot. Chatbot is a computer program based on artificial intelligence that can carry out conversations through audio or text. This study intends to find out and analyze the types of artificial intelligence in the form of chatbots and the possibility of their use as language learning medium. The data in this study obtained from literature review on chatbot researches, and from observation results on chatbot-based language learning medium developed by the author. The results indicated that chatbots have a high potential to be used as a language learning medium, both as tutor in practicing language, and as independent learning medium. Moreover, research results revealed that language learners are interested in using chatbots because they can be used anytime and anywhere, and they are more confident in learning languages using chatbots than when dealing directly with human tutors.

4.   **International Conference on Internet Science INSCI 2017: Internet Science pp 3773921 Cite as "Why People Use Chatbots" Author: Petter Bae Brandtzaeg.**

There is a growing interest in chatbots, which are machine agents serving as natural language user interfaces for data and service providers. However, no studies have empirically investigated people's motivations for using chatbots. In this study, an online questionnaire asked chatbot users (N = 146, aged 16— 55 years) from the US to report their reasons for using chatbots. The study identifies key motivational factors driving chatbot use. The most frequently reported motivational factor is "productivity"; chatbots help users to obtain timely and efficient assistance or information. Chatbot users also reported motivations pertaining to entertainment, social and relational factors, and curiosity about what they view as a novel phenomenon. The findings are discussed in terms of the uses and gratifications theory, and they provide insight into why people choose to Interact with automated agents online. The findings can help developers facilitate better human—chatbot interaction experiences in 12 the future. Possible design guidelines are suggested, reflecting different chatbot user motivations.

5.   **A Study of Today's A.I. through Chatbots and Rediscovery of Machine Intelligence 10.14257/ijunesst.2015.8.7.28 Project: Development of Artificial Intelligent Language and simulation on FPGA Anirudh Khanna, Bishwajeet Pandey, Kushagra Vashishta, Teerath Das.**

Artificial Intelligence in machines is a very challenging discussion. It involves the creation of machines which can simulate intelligence. This paper discusses some of the current trends and practices in Al and subsequently offers alternative theory for improvement In some of today's prominent and widely accepted postulates. For this, focus on the structuring and functioning of a simple A.I. system - chatbots (or chatter bots) is made. The paper shows how current approach towards A.I. is not adequate and offers a new theory that discusses machine intelligence, throwing light to the future of intelligent systems.

III. A.I CHATBOT

Healthwave Artificial Intelligence Chatbot can also make appointments with the doctors in both Bot chat and Video conferencing. Certain diseases can be defined or predicted perfectly by Healthwave Chatbot. Healthwave Chatbot application gives 24/7 service for the society to get instant Healthcare advices within minutes. In existing projects there are only text message options with doctor opinions and direct appointment making but in Healthwave they have the combination of video and chat conferencing with the specified doctors. Healthwave Chatbot could be a life changer for instant remedies or treatment for diseases with the specialized doctors.

Healthwave application also gets the nearby hospital details within seconds by trackin ^{o} the GPS of the device location. The only way to access them by signing up with our Chatbot and making use of it.

IV. EXPERIMENTAL RESULTS

Figures show the result of the healthwave using chatbot. Fig (a) it display to create account
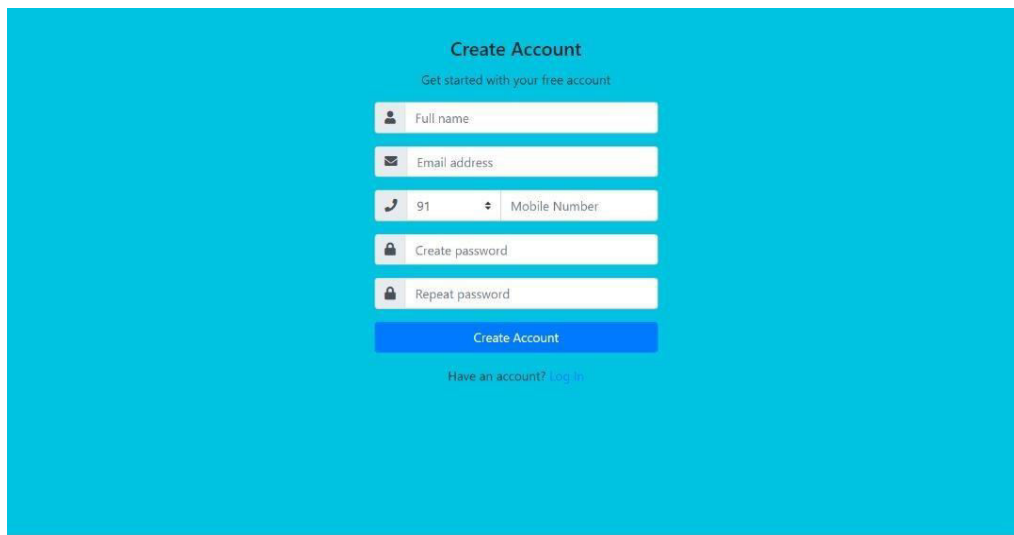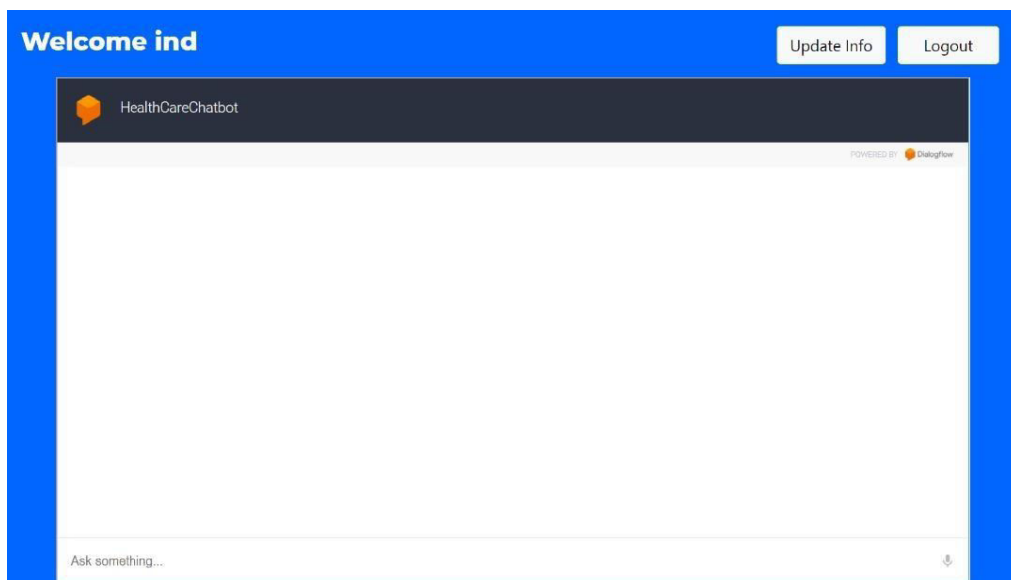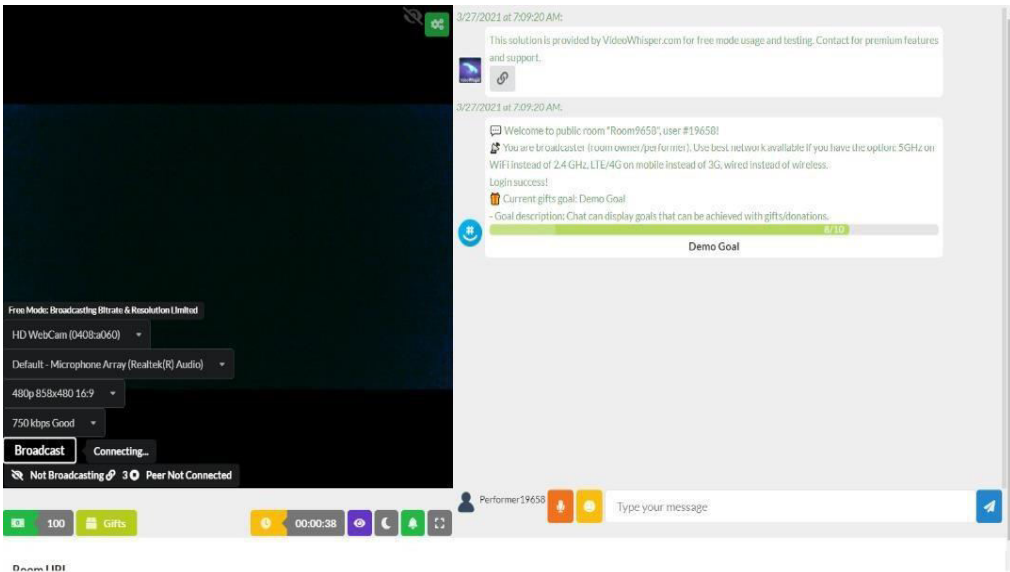

fig (a)

Figure(b) shows the chatbot screen(human to bot) after user create account.
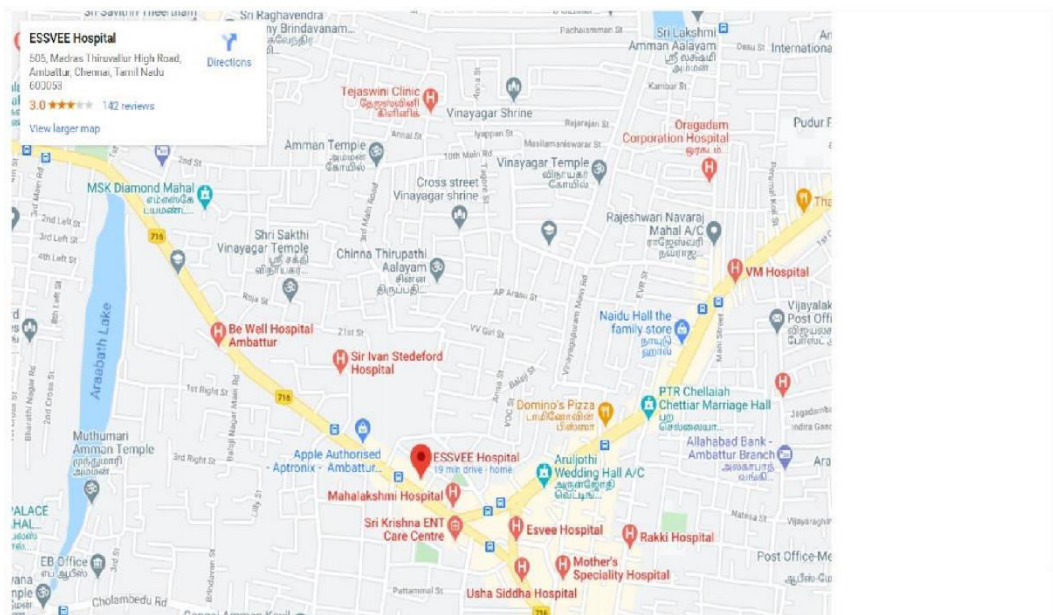

fig(b)

fig(c)

Figure(c) shows the video conferencing page(human to human).

fig(d)

figure(d) display the hospitals around the user location.

V.CONCLUSION

Our medical chatbot provide medical assistance to the patients for some of the general diseases like fever, cold, typhoid, malaria, jaundice etc. We are inventing the system because of the need of the increasing population of our country. Such systems are available in foreign but not in our country. As we know well about it that the numbers of doctors are less to serve the need of the patient. This scenario can be better understood by walking through the city's government hospitals. Thus, the medical chatbot will give the medical assistance to the patients while the doctor is not available which will ultimately improve the efficiency & performance of the medical industry by decreasing the death rate. The application of chatbot in the medical domain is quite way beyond then our imaginations. We have covered almost all the points which a medical chatbot should support to cater the need of the patient. In past few years there are

lot of models of medical chatbot has been invented which were quite expensive for a normal person but we have tried to overcome this drawback in our health care chatbot system.

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