AI-based chatbots for providing health-related information

Dungi Pravalika Reddy
pravalikareddy6@yahoo.com
Andhra University College of Engineering for Women, Visakhapatnam, Andhra Pradesh

Dadala Shantha Shekinah
shekinahd37@gmail.com
Andhra University College of Engineering for Women, Visakhapatnam, Andhra Pradesh

Gunisetty Pavani Suvarna Satya
Satyagunnisetty@gmail.com
Andhra University College of Engineering for Women, Visakhapatnam, Andhra Pradesh

Kolla Hasitha Naidu
saisekharlalam@gmail.com
Andhra University College of Engineering for Women, Visakhapatnam, Andhra Pradesh

Dr. K. Soumya
soumyacf@andhrauniversity.edu.in
Andhra University College of Engineering for Women, Visakhapatnam, Andhra Pradesh

ABSTRACT
Chatbots in health care system may have the potential to provide patients with access to immediate medical information. Health care chatbots can help patients better manage their own health; improve access and timeliness to care. AI based Chatbots for supplying health related information. The System uses artificial intelligence which includes advanced Natural language processing to answer the query Tf-idf weighting. The User can query any health related activities through the system. The user does not have to personally go to the health for enquiry. The software analyses the questions and then answers the user. The software answer the queries as if it is questioned by a person. The software answers using a Graphical user interface which implies that as if a pupil is talking to the user. The user has to register himself to the software and has to login. After login user can access to the bot. A chatbot is a program that communicates with people.

Keywords— Chatbots, AI, Graphical User Interface

1. INTRODUCTION
In recent time, Chatbots have become the importance of better research. The main purpose of so called chat-bots is to perform conversation between machine and individual consumers via NL which should be as human-like as possible. Based on the chat bot was made for conversations, usually serves some definite intentions such as searching in web. There are several approaches to human-computer interaction. One of them is via natural language, which again has more sub approaches and goals. At present the biggest challenges that existing chatbots have are maintaining the perspective and understanding the human inputs and their responses. Chatbot is used for making communication between machine and human. Chatbots can be useful for supplying customer services, presenting product recommendations, attracting the customers through different marketing campaigns and many more different areas of business.

2. DESCRIPTION OF PROJECT
We will see more detailed chatbot solutions grow on the market in the near future. The most innovative chatbots will integrate many features. For instance, chatbots will help users check their symptoms and by depending on the diagnosis, answer to the queries. The doctor will prescribe medicines after consultation and the system will store the prescription. There is lot of room for enhancement in the healthcare system when it comes to AI and other tech solutions. Chatbots’ role is always acceptable to be improving the job of healthcare experts, instead of replacing them. So, the advantages of using chatbots in healthcare are uncountable. They can eliminate costs dramatically and reduce the pressure on healthcare professionals, and enhance patient results. Chatbots are the best suited to non-urgent medical requirements and routine jobs and NLP in the future may yet to find chatbots utilized in more complicated applications.

3. SYSTEM REQUIREMENTS
3.1 Hardware Requirements
Processor: Any Update Processor
3.2 Software Requirements
Operating System: Windows Family
Technology: Java(1.7/1.8)
Web Technologies: Html,Html-5,JavaScript,CSS
Web Server: Tomcat 7/8
Server Side Lang: J2EE
Database: My SQL 5.5
UML: Star UML
DFD: DFD Drawer

4. MODULES
4.1 Functional Requirements
• User Signup: By using this user can get a account in application.
• User Login: To access the Project by using users login user name and Password we are verifying.
• Admin Login: Only one user can login into the application with his/her user name and password.

4.2 Non-Functional Requirements
• Usability Requirement
• Serviceability Requirement
• Manageability Requirement
• Recoverability Requirement
• Security Requirement
• Data Integrity Requirement
• Capacity Requirement
• Availability Requirement
• Scalability Requirement
• Interoperability Requirement
• Reliability Requirement
• Maintainability Requirement
• Regulatory Requirement

5. ALGORITHM

We have created a Health bot in such a way that, system architecture explains us that when a user is trying to get some information about the health power. User will be chatting or asking questions to Health bot. In turn Health bot will respond to the user with most appropriate answer. If the Health bot is not having the answer to the question provided by the user it will provide a default answer and that question will be given as a suggestion to the admin to mark or provide the answer for the requested question so that answer provided by the admin will be recorded or stored for the next time.
5.1 Admin Module
In our application admin is the application service provider, admin can facilitate to the end users to get clear idea and clear answers to users queries about the health energy system. Admin will create dataset dynamically for the chatbot question and answers. If user not get the answer of the questions those queries application will collect and display to the admin. Admin feels those questions are worthy to add then admin will add those queries with answers.

5.2 User Module
User is the end user of our system. User can login in to the application with login details, and ask the chatbot whatever the queries he / she has. Application or our chatbot will perform the algorithm to rank the best answer to that query. If user hasn’t get any answer then application will forward that query to admin as suggestions.

6. OUTPUTS
Use of AI based Chat bots for providing health related information

What is depression

A mental health disorder characterised by persistently depressed mood or loss of interest in activities, causing significant impairment in daily life.