IJARCCE

ISSN (Online) 2278-1021
ISSN (Print) 2319-5940

International Journal of Advanced Research in Computer and Communication Engineering

Vol. 8, Issue 4, April 2019

Chatbot System

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Abstract: For a student interface web applications can come in a different of formats, ranging from command-line, graphical, web application, and even voice. While the most popular user interface include graphical and web-based applications, occasionally the need arises for an alternative interface. Whether due to multi-threaded complexity, concurrent connectivity, or details surrounding execution of the service, a chat bot based interface may suit the need. Chat bots provide a text-based user interface, allowing the user to type commands and receive text as well as text to speech response. Web application using Chat bots are usually a form full services, remembering previous in order to provide functionality. When chat bot technology is integrated with popular web services it can be utilized securely by an even larger audience.

Keywords: Chatbot, Machine Learning, Artificial Intelligence

I. INTRODUCTION

A chat bot (also known as a talk bot, Bot, chatterbox, Artificial Conversational Entity) is a computer program which conducts a conversation via auditory or textual methods. Such programs are every time designed to determine how a human would behave as a conversational partner, thereby passing the Turing test. It is used in dialog format for various practical purposes including customer service or information acquisition. Chat bots are usually converted into the dialog systems of, for example, automated online assistants, giving them the ability of, for example, small talking or engaging in normal conversations unrelated to the important of their primary expert systems. College Enquiry Chat Bot project will be built using artificial intelligence algorithms that will analyze users queries and understand users message.

[5] This system will be a web application which will provide answers to the queries of the students. Students will just have to select the category for the department queries and then ask the query to the bot that will be used for chatting. The answer to the query will be answered on the basis of the user queries and the knowledge base. The important keywords will be fetched from the keywords and the answer to those keywords will be searched in the knowledge base. If the match is found, the relevant answer will be provided to the user or the default message will be shown to the user that "Answer to this query is not available at the moment, please revert back after some time".[5]The "Keyword Matching" algorithm will be used to match the keywords from the knowledge base In some cases, user may find out that the answer given to his/her query is not relevant.

In such cases, the user can mark this answer as Invalid, and an instance of this invalid answer will be sent to the Admin panel at the same time. Whenever Admin will log in, he will get to see the answers which are marked invalid and then he can do the necessary changes to the knowledge base so that user will get the accurate result when he will ask the same question next time. The system will have two types of users. First of all the user will be the Admin, who will handle the whole system, and the other type of the user will be Students. Without the registration no user can access system and after the registration user will have ID and password for login purpose after that student can ask questions to system. Then after successful registration, the student can ask his queries. To access this system, student should have web service net connected device. The student can access this system from any place and at any time. The response time to the questions of the user will depend upon the internet speed of the user.

If user has a decent internet connection, he/she will get the answers to his/her queries in the usual time. The usual reply time will be around 3-5 seconds as the process involves fetching the keywords from the users query, searching it in the knowledge base and then showing the output. If the user has a bad internet connection, it will take some more time for him to get the output.

IJARCCE
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II. PROBLEM DEFINITION AND MOTIVATION

A chatbot is a computer program that is designed to simulate conversation with the users, often over Internet. Furthermore the analogy that chatbot often treats a conversation like a game of tennis can be used to describe the conversation flow of the chatbot, i.e. get message, reply, get message, reply, and so on (The Oxford Dictionary, 2018). Deryugina (2010) provides almost the same definition, but adds the word 'intelligent' before communication, specifying the need for intelligent replies rather than just random ones. The chatbot technology has been referred to by many names, the more established ones include: Chatbot (can be spelled chat bot, chat-bot as well), Chatterbot, Conversational Agent, Conversational System and Pedagogical Agent (or Intelligent Pedagogical Agent, IPA). The last is exclusively used in educational settings or educational papers. (Deryugina, 2010; Doering, Veletsianos, and Yerasimou, 2008; Heller and Procter, 2009). Chatbots are build in many ways, but a popular and quite simple way is through the use of AIML, which is presented in the next section.

Chatbots are trending and they can now be found in almost every industry from e-commerce to travel. The increased use of late may be due to improved language processing or the more accessible development tools for non-developers. It may also be that many chatbots are made available through mainstream messaging applications, thus not forcing the user to download yet another application and allowing them to keep using an application they are already comfortable with.

III. PROPOSED SYSTEM

In Proposed system there two main modules Admin and user

1. Admin:- Admin is responsible for a management of user authentication . without the verification and authentication of the admin, user can not access the application .Admin is also responsible for adding user and restricting user to access application and delete user. If he/she post unwanted stuff.

2. Student / User:- Student /user have to registered with system using unique id and password. After that admin authenticate user. After authentication of admin user can access the system and ask the question /queries to the system. And get answer. The questions and queries ask by the student get stored in the database with the whole details of student including time and date.

IV. SYSTEM ARCHITECTURE

Following diagram is our system's architecture diagram:

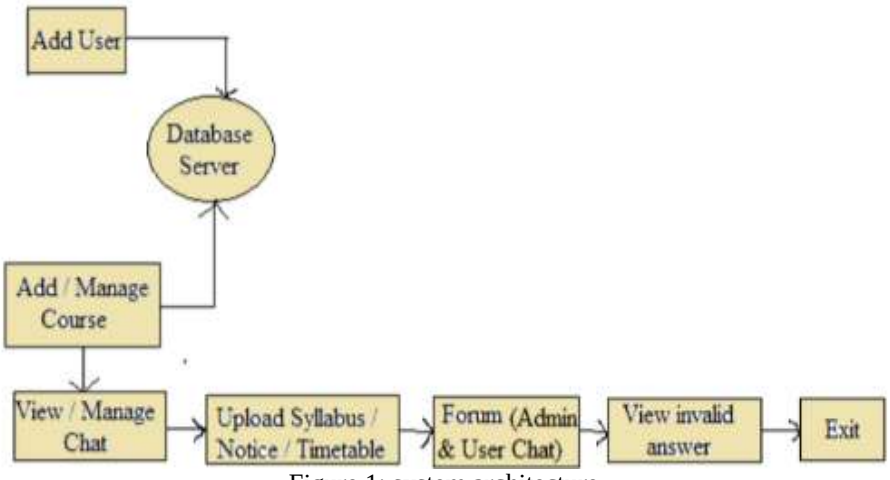

Figure 1: system architecture

In System architecture According to the architectural diagram of College Information Chat Bot System, there are 3 modules which are explained as follows accordingly.

User :- This module is adding user/student to the web system. User/student is assigned a unique id and password for authentication .after that get access into the system for its utilization.

Database Server :- It keeps record of all the student credentials, college data and their queries etc.

IJARCCE

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Manage :- In this module the admin performs the different tasks to access into the database various college information requirements like placement sheet, dept info, timetable, general notices, etc . All this information are then retrieved as a response to the user question accordingly.

View/Edit Chat :- In this , user types the query and the bot replies to the user query accordingly, changes occur in this phase only

Upload :- In this section we can upload general notices like time schedule, exam dates, fee structure ,events etc.

Exit :- In this phase we can sign out from the system after finishing our work

V. METHODOLOGIES

A Student chat bot is using a algorithms that analyses student 's queries and understand student's message. This System is a web application which provides answer to the question of the student. Students have to question through the chat bot which is used for chatting. Students can chat using any format there is no specific format the student has to follow. The System uses built in artificial intelligence to answer the question. The answers are appropriate what the student question. If the answer get to invalid then student just need to select and click the invalid answer button which will notify the admin about the incorrect answer. Admin can see the invalid answer via portal login System allows admin to delete the invalid answer or to add a specific answer of that equivalent question. The System analyses the question and then answers to the student. The system answers to the question as if it is answered by the person. With the help of algorithm , the system answers the query asked by the students.

VI. ALGORITHM

User upload the file in the system which get trained by system and get stored in the database that use in the application. once the file is uploaded user get eligible to ask the question to the system.

1.Input question:-User input/ask the question based on uploaded file to the system.

2. Streaming question:-The question related to the uploaded file and user input get display in queue.

3. Selecting Object:-The system select the object From user question and match with streaming question.

4. Read file content and splitting line by line:-The system ead file content and split the user ask question line by line to match with streaming question.

5. Check Object line by line:-A system check input question /object and generate the answer base on ask question, uploaded file using streaming question and other data.

6. Append Answer:-Generated answer get append with question and get display to the user.

7. Return answer :- user get display ask question along with append answer through chatbot system

All the ask question, uploaded file, generated answer all this data get stored in MYSQL database that is used in the system .

VI. ADVANTAGES

1. Improved accuracy.
2. Gaining insights.
3. Better understanding.
4. Response based
5. Keeps posterior information.

VII. CONCLUSION

The system which is build will produce output as per the need of student . The main objectives of the project is to develop an algorithm that will be used to identify answers related to user questions. To develop a database were all the related data will be stored and to develop a web interface. The web interface developed has two parts, one for simple users and one for the administrator Reduces human effort. As it generate model machine learning plays a keen role for enhancing the system.

IJARCCE

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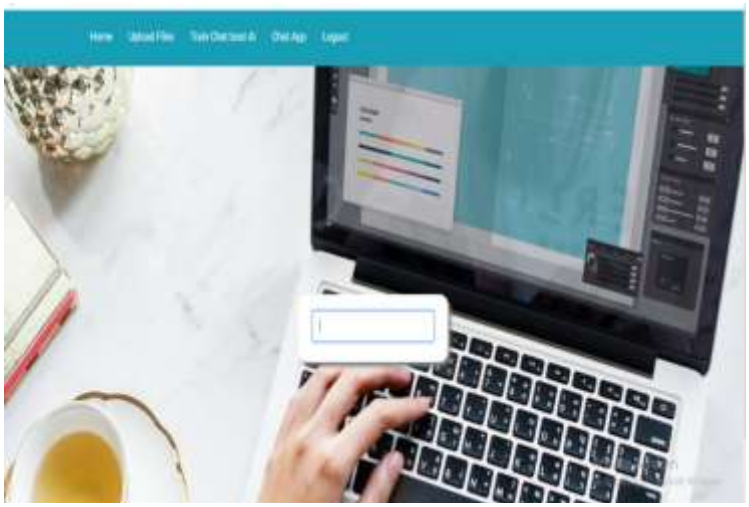
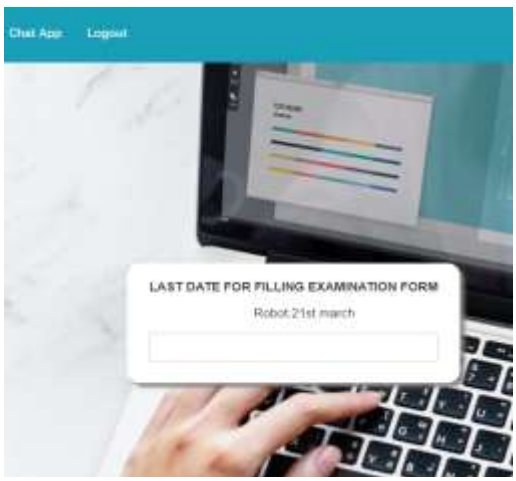
VIII. RESULT

```
public class Chatbot {
    private static final boolean TRACE_MODE = false;
    static String botName = "super";

    public String getChat(String msg) {
        String response = null;
        try {

            String resourcesPath = getResourcesPath();
            System.out.println(resourcesPath);
            MagicBooleans.trace_mode = TRACE_MODE;
            Bot bot = new Bot("super", resourcesPath);
            Chat chatSession = new Chat(bot);
            bot.brain.nodeStats();
            String textLine = msg;//"what is jms";

            response = chatSession.multisentenceRespond(textLine);
            System.out.println("LAST DATE FOR FILLING EXAMINATION FORM : " + response);
            return response;

        } catch (Exception e) {
            e.printStackTrace();
        }
        return msg;

    }
```





DOI 10.17148/IJARCCE.2019.8418

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