INTELLIGENT CHATBOT FOR COLLEGE ENQUIRY SYSTEM

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Abstract - **The proposed concept is to create a chatbot that communicates in a human-like manner, giving the user the impression that he is conversing with another human being. Chatbot application allows students to obtain college-related information from anywhere and at any time. Students will only have to choose a department query category, and the quarries will be sent to the bot that will be used to engage. Students can ask questions about admissions, faculty information, and so on. This system decreases the amount of work that the college administration has to do in giving information to students, as well as the amount of work that the staff has to do in answering all of the students' questions.**

Keywords :   **Pattern Matching Algorithm , AIML , Natural language processing (NLP), LSTM**

1. INTRODUCTION

A chatbot is a computer software that uses text or text-to-speech technology to conduct an online chat conversation. University ChatBot is an internet program that uses artificial intelligence to converse with humans. In the Other online programs like the "Eliza," "Cleverbot," and others have been created in the past. So this system is an online application that responds to a question from a learner. In most cases, the Student's Question is a conversation. There is no fixed format for chatting with the bot; it can be done in any way. In our project, we employed NLP to accomplish this. The goal of this project is to create an intelligent chat-bot system that will handle academic activities like as admissions, fees, scholarship information, departmental timetables, and details on the documents that must be attached, among other things. The method is designed to assist in the streamlining of the admissions process for various courses. It interacts with students in real time, removing any lingering questions they may have about the admissions process. Users can get information on college-related events through the system. The system has an easy-to-use graphical user interface. The system uses A.I. and M.L. to resolve queries.

The concept for the college chatbot is based on Google Assistant, which will answer student questions via a web application. It provides links that are related to the user's query. By clicking on the link, the user can get answers to their inquiries. The chatbot extracts data and displays conversations between the human user and the bot using a standard algorithm. It provides information about college activities such as results, timetables, important notices, and placement notices, among other things. The system, in most situations, finds the intentions, or keywords.

I.I PROBLEM STATEMENT

Students need to manually visit the college to get their queries answered by the college help desk. This process consumes a lot of time as well as money as the customer needs to visit college if it's miles away from home. Also, this process may lead to communication gaps between students and colleges. To design and create an online chatbot system for helping students based on a well-informed database that will be used for pattern matching using Artificial Intelligence and Natural Language Processing.

I.II OBJECTIVE

The objectives are as follows:

1) Reasoning: It will answer the user from any perspective.

2) Learning: It will learn from the inputs it experiences for better output.

 3) Multilingual: It will be accessible in 3 languages – English, Hindi and Marathi.

4) Guide throughout the admission process and will give option to users to give suggestions.

5) Giving accurate information about the whole institute including the professors, placement, events, location, etc.

The proposed system would be an application that delivers answers to the scholar's or user's questions. Users will simply use the chatbot that is currently in use to ask queries. Students are free to communicate in any format they wish; there is no restriction that they follow a set format. The responses are relevant to the user's questions. If the responses are invalid or unavailable, the queries are stored in the unrequited table, which is essentially created

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by the administrator. Later, the administrator can update such queries; however, in the event of an emergency, we will send a message stating that "our staff will contact you quickly."

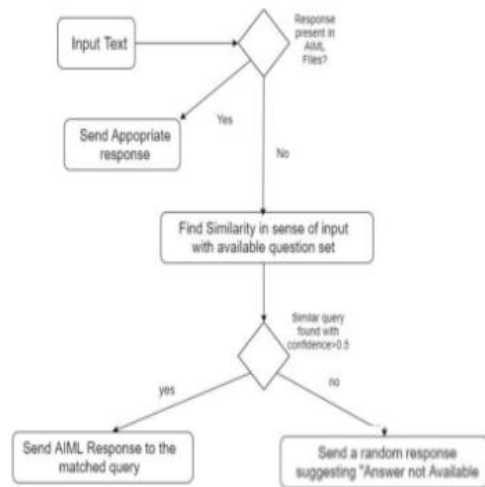The system flowchart of our project is shown   in Fig.1 below.

Fig. 1: SYSTEM FLOWCHART

I.III SCOPE

Because of covid pandemic everything has gone digital in today's environment. Working in the educational system is quite a time demanding and requires additional people. This application is designed for   and interest. In this project, we develop an application so that students do not have to go to the college office to enquire about something. Students can use the program to stay up to date. students. Students can access all college documents required for the admission process at any time and from any location, whether they are at college or not. In addition, employee labor will be reduced.

II. LITERATURE SURVEY

Artificial Intelligence can be used to create a wide range of applications. One of these is a collegiate chatbot system, which is mentioned in this study. Despite the fact that chatbots can be used in a variety of industries like marketing, education, banking, clinical, and finance, they are not widely used. Regular rule-based chatbots are being researched to see if they can be informative, responsive,

and finish correspondence in a conversational human language. Natural Language Processing (NLP) and Machine Learning (ML) technologies must be integrated into the college chatbot system to do this.

The "Chatter Bot Algorithm" was devised by Michael Maudlin in 1994 and published in the book Julia, and it was used to answer the queries. Following up on this original concept, several projects were created to establish a chatbot system. To utilise the Chat-Bot programme, the user must first log in. At that time, the user is free to submit any concerns or inquiries. When a user submits a query to the bot, the context is identified and NLP is used. To differentiate the feeling of the words, WordNet calculation [4] and grammatical forms labelling are used. The knowledge database is used to check user questions. If the suitable response is found, it is then sent to the user. If a query isn't discovered in the database, the administrator responds to the request.

Balbir Singh Bani, Ajay Pratap Singh[4] investigates the implementation of the ALICE chatbot system as an application. ALICE is open-source chatbot developed by Dr.Wallace, which is based on natural language understanding and pattern matching; also the architecture of the "chatbot Balbir Singh Bani, Ajay Pratap Singh, engine" and the "language knowledge model" are clearly separated, which gives us the opportunity to easily inject a newly developed knowledge model such as our FAQ knowledge model.

P.Nikhila, G.Jyothi, K.Mounika, Mr. C Kishor KumarReddy, and Dr. B V Ramana Murthy [13] have built a response to enquiries using AIML (Artificial Intelligence Mark-up Language). AIML is used to create or customize alicebot, which is a chatbot application that is supported by ALICE free code. [13]

Nitesh Thakur, Akshay Hiwrale, Sourabh Selote, Abhijeet Shinde, and Prof. Namrata Mahakalkar [10] suggested an artificial chatbot based on NLP (Natural Language Processing), which may be done in two ways: written text and vocal or voice conversation. Written communication is far more straightforward than vocal communication. This research explores some new possibilities for evolving speed understanding and processing in virtual human discourse systems [10].

[15]The chatbot created here is a web based application which uses Natural Language Processing Libraries and Artificial Intelligence Markup Language to have conversations with humans. This report revolves around the concept of NLP and AIML along with the work

committed to build Eliza. The sample application is developed using Python Kernel and XML's Artificial Intelligence Markup Language(AIML) along with a database file which stores the name, e-mail, and password to tell the GPA of a student.

III.MODULES AND FUNCTIONS

Research methodology refers to the techniques or tactics used to collect, select, process, and analyze information about a topic. A research article's methodology section allows the reader to objectively evaluate the study's overall validity and dependability. The proposed methodology incorporates both qualitative and quantitative perspectives. The following modules will be included in the system:

III.I USER / ADMIN LOGIN

Users must login with their credentials (i.e. User Id and Password) on the portal to access the various parts and ask questions or complain with the help of the bots. Users will be given the option of choosing between Marathi, Hindi, or English during this process. Through their own login, administrators (i.e. college authorities) will have access to all query logs. They'll be able to alter or even contribute new responses to the system's questions.

III.II INTERACTION WITH THE BOT

Users can engage with the bot to ask or enquire about college-related activities instead of contacting the college helpdesk or college workers. The Student's Question is typically followed by a discussion. Chatting with the bot has no set format, so you can do it as you wish. This was accomplished through the use of NLP in our project. The user can look for information about college-related events such as yearly days, sports days, and other cultural events, as well as the date and time of each. Reduce the number of youngsters and teachers on the job to save time and money. It refers to a teacher's and a student's capacity to communicate effectively with one another.

III.III PROVIDING INFORMATION

Chat-bot system will handle academic activities like admissions, fees, scholarship information, departmental timetables, and details on the documents that must be attached, among other things. Whenever user submits a question or query, the exact question/queries are detected. Then chat-bot checks for the query in the database if it is already there or not in the database. If the answer is available in the database then the answer is sent to the User. If question is not present in the database, user

will get response as invalid question. And such questions are forwarded to admin person. Admin can have a look on such user submitted questions and if those questions are found to be valid then information related to such questions can be stored in the database by the admin person.

IV. RESULT AND CONCLUSION

The goal of the system is to keep students up to date on their college activities. It has been determined that the system will function properly and will thereby meet the needs of the end users. The system is thoroughly tested, and any problems are identified and corrected. This program will be accessed from one or more systems. The project's major goals were to create an algorithm that would be able to recognise answers to questions supplied by users. Students can utilise the application to keep up with current events. students. Whether they are at college or not, students can access all college documents required for the admission process at any time and from any location.
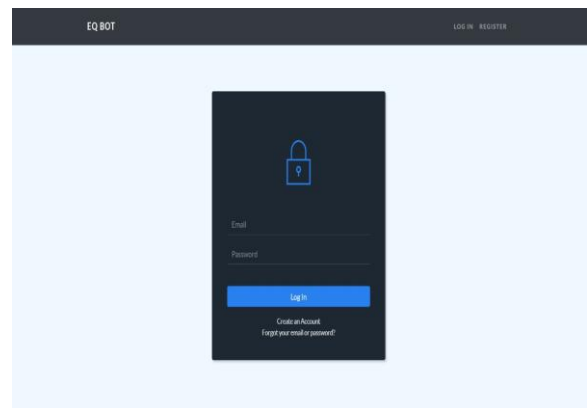
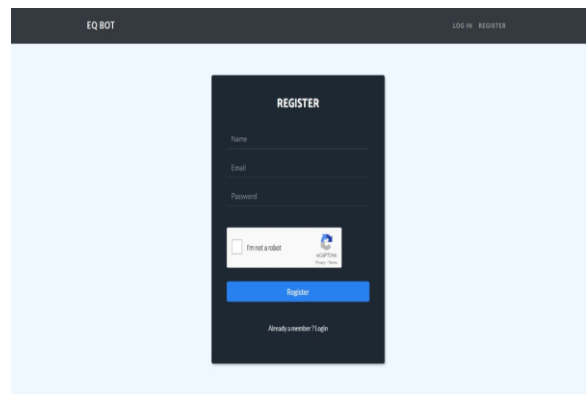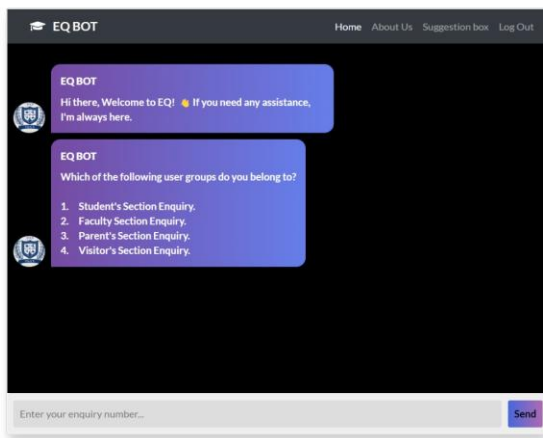

Figure 1. Login Screen

Figure 2. Registration Screen

Figure 3. Chatbot Screen
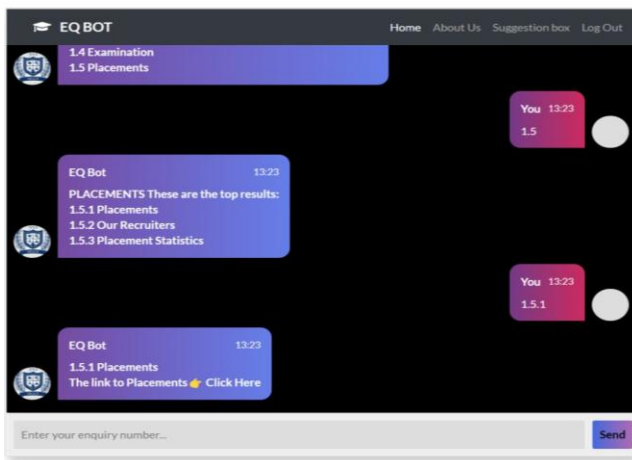
Figure 4. Human Interaction with Chatbot

Figure 5. Suggestion Box

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