

College Enquiry Chat bot using Python

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Abstract— This project is focusing on creating a chatbot to be used by students to get their queries responded easily from the college website. The College Enquiry Chatbot has the capacity to make friendly conversations; respond the course and faculty details; answer the frequently asked questions; and give the timings, address, contacts, and events information of the. To build the chatbot, Most of the existing chatbots lack empathy and fail to accommodate anything outside of the script. In order to address these problems, the College Enquiry Chatbot extends the implementation of the chatbots by. Although sentimental analysis correctly recognizes the user's query as positive, negative and neutral, the system was partially successful in adding empathy to the chatbot. It is because the system requires more rigorous training data to handle all queries which are off-script. However, for such queries, active learning helps to improve the chatbot via performance since it correctly understands the user's questions, asks clarifying questions, and then retrain the system to give the response what the user intends to get. The future work includes training the chatbot with more varied data; increasing the scope of the chatbot by adding a speech recognition feature so that users can speak to get responses; and including integration with multiple channels such as phone call, SMS, and various social media platforms.

Keywords: Natural Language Processing (NLP), Natural Language Toolkit (NLTK), AI or Machine Learning Algorithms

I. INTRODUCTION

This project is focusing on creating a chatbot to be used by students to get their queries responded easily. A chatbot is a program which can do real conversations with textual and/or auditory methods. Using Artificial Intelligence (AI), chatbots can simulate human conversations. There are two categories of chatbots. One category is command based chatbots where chatbots rely on a databank of replies and heuristics. The user must be very specific while asking the questions so that the bot can answer. Hence, these bots can answer limited set of questions and cannot perform function outside of the code. The other category is chatbots based on AI or machine learning algorithms, these bots can answer ambiguous questions which means the user do not have to be specific while asking questions.

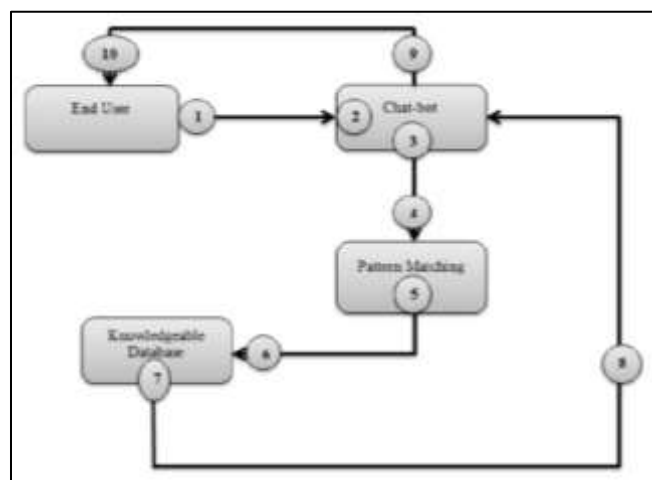


Fig. 1: System Architecture

Thus, these bots create replies for the user's queries using Natural Language Processing (NLP) Analyzing the request Identify Intents and Entities Building a Response Figure 1 shows how a chatbot works. Whenever a user asks any query, the bot will first analyze the request, then identifies intents and entities, builds a response and sends it back to the user. For example, if a student wants to know the office hours of a faculty, then the intent will be office hours and entity will be name of the faculty in this case. Chatbots are motivated by the need of traditional websites to provide a chat facility where a bot is required to be able to chat with user and solve queries. When live agent can handle only two to three operations at a time, chatbots can operate without an upper limit which really scales up the operations. Also, if any school or business is receiving lots of queries, having a chatbot on a website takes off the load from support team. Having a chatbot clearly improves the response rate compared to human support team. In addition, since millennials prefer live chats over a phone call, they find a chatbot, which provide a highly interactive marketing platform, very attractive. There can be some scenarios where a business or school receives same queries in a day for many times and support team must respond to each query repetitively. Lastly, the most important advantage of having a chatbot is that it is available 24/7. No matter what time it is, a user can get a query solved. All these advantages of a chatbot constitute the motivation to implement a College Enquiry Chatbot. Before implementing College Enquiry Chatbot, various existing chatbots were reviewed such as Amazon Shopping App, Alexa, Bank of America (Erica's bot) 3 and CNN news bot. In order to understand the requirement of a chatbot, consider an example of Amazon Shopping App. In this app, when a customer buys an item, he/she does not have any information about how to return the item. To get this information, the customer must call and wait to talk to customer representative for a long time. However, this whole process is tedious for a customer. Hence, Amazon created a chatbot to answer simple queries of customers.

Similarly, the College Enquiry Chatbot is designed to help students to get their queries solved on a fingertip. downside I found while utilizing the previously mentioned chatbots is absence of personality and conversational flow.

II. LITERATURE SURVEY

A literature survey is a comprehensive summary of previous research on a topic. The literature review surveys scholarly articles, books, and other sources relevant to a particular area of research. It should give a theoretical base for the research and help you (the author) determine the nature of your research Prof. Bharati Kudale. proposed a college enquiry chatbot system which has been built by using Artificial Intelligence algorithms. The bot analyses user's query and understands user messages. The system has modules like Online chatbot. Shilpa Katore, Priya Shid, Shruti Kale, a chatbot is designed by them using knowledge in database. The proposed system has College Enquiry Chatbot System. The development is done using various programming languages by creating a user-friendly graphical interface to send and receive response. The main for pattern matching which is been stored in JSON file. Written communication is much easier than the verbal communication. This paper introduces an interest in some emerging capabilities for evolving speed understanding and processing in virtual human dialogue system.

III. SYSTEM ANALYSIS

A. Existing System

In the earlier day's students had to visit the college to enquire about details like courses, fee structure, admission process and other information about the college, which is a tiresome process as well as long process for both parents as well as students. Now a days there are many changes occurred in the Education system with help of advanced technology. Everything is happening over the internet without any trouble. In those days for enquiring about courses we have to visit the college, but as the days are passing away its completing changing. Collecting the course details, fee structure manually will be hectic procedure and it also needs a manpower. For reducing that manpower and avoid such difficulties and time consuming many devices or systems were emerged day by day.

B. Proposed System

chatbot is a web Based software that is used to interact between a computer and a human in natural language like human's chat. Chatbots chat with the user in a conversation in place of a human and reply to the user. The goal of this report on chatbot was to resemble a human being in the way they interact, trying to make the user think he is chatting with another human being. The chat bot application helps the students to access the College related information from anywhere with internet connection. This system reduces work of college administration providing information to students and also reduces the workload on the staff to answer all the queries of the students. Chatbots are virtual users or virtual assistants for communicating via messaging or chat. They are programs which communicate with a user through messaging or chat interface. Chatbot is designed for college purpose

where the students would not have to visit the campus personally instead everything like notices, results, timetable, assignments would be made available at the fingertip just with the help of mobile phone and internet connection through a login. Also, the faculty would not require to make constant announcement in the class about a particular notice; rather things would get uploaded into the chatbots database by the admin.

IV. CONCLUSION

The goal of the system is to help the students to stay updated with their college activities. Artificial Intelligent is the fastest growing technology everywhere in the world, with the help of Artificial Intelligent and Knowledgeable database. We can make the transformation in the pattern matching and virtual assistance. This system is developing chat bot based on android system so with the combination of Artificial Intelligent Knowledgeable database and virtual assistance. We can develop such chat bot which will make a conversion between human and machine and will satisfy the question raised by user. The main motive of the project is to reduce the work load on the college's office staff and reduce the response time to a user's query.

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