

College Enquiry Chatbot

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Abstract: *College Enquiry Chat bot is a type of web application, the main motto of this project is to provide information regarding college. It gives the information regarding college only. The information may be like “how many branches in college?”, “ what are the courses offered by the college?”, “ how many students per each branch?”. By adding some more features and doing some improvements we can embedded this project into working site of college. The chatbot created here is a web-based application which used Natural Language Processing Libraries and Artificial Intelligence Language to have conversations with humans. It is a simple bot which answers the queries regarding the college. Here the chatbot is interaction between human and machine. The machine may be like computer, mobile, tab etc. We can access the information from anywhere and using any device. In order to make a machine easy to understand human language we are using “Natural Language Processing”. The interaction between computer and human will be easy when we use “Natural Language Processing”.*

Keywords: Natural Language Processing, Artificial Intelligence, Web application

1. Introduction

A chatbot is a web application it works in the presence of network. Without network it will not work. It makes the communication between human and computer through online. Chatbot is designed like human like the way human makes conversation with another human. College chatbot will give responses to the user queries; it contains the queries regarding college only like Administration, Management, Examination, Placement, Canteen, Stationary etc.

For creating bots several languages are used like Artificial Intelligence Mark-up Language (AIML) and Natural language processing (NLP). AIML is based on XML language in this language developer will write rules bot will follow the rules that are created by the developer. Natural language processing (NLP) is used to make conversation between human and bot easy. The algorithm used in this project is Artificial Neural Network (ANN). In this project it handles simple queries related to college only. If we give queries other than the college it won't respond to that query. Another drawback is writing queries for different scenarios are very time consuming. The queries are asked in the form of text like English language chatbot also give response in the form of text only. Whenever User uses chatbot use rmay feel like he/she may talk to the staff from the college. AI provides several features for the chatbot to behave like smart and responses to the query in intelligent way.

The main purpose of this project is to make conversation between human and computer in a situation where human unable to come to the college to know information regarding college like admission details, placements, fee structure, exam branch, canteen, different departments information, courses that are offered by the college etc. With this we can easily know the information regarding college in less time through virtually.

2. Related Work

Some of the chatbots that are working in real time are Slush, Vainu, Sephora these chatbots are using AI technology. Slush is a chatbot it gives responses to the customer queries

immediately without any delay where manual process takes too much time to give response to the user queries. There are number of customers approaching company staff for any support it is difficult to solve everyone's problem so the chatbot is the solution to answer the queries immediately it works 24/7.

3. Literature Survey

The chatbot is a software program that is used to interact with clients using natural language. Humans can be replaced by chatbot. It can be used in acquiring information. The first chatbot with ELIZA name was constructed in 1966. In the history of chatbot ALICE was the first online chatbot inspired by ELIZA. Chatbots have good conversational abilities they are good at emulating a human conversation and they learn through knowledge. Introducing AIML to chatbot has increased their efficiency in query retrievals. As compared to rule-based system AIML is much better. Ikhila, G. Jyothi, K. Mounika, Mr. C Kishor Kumar Reddy and Dr. B V Ramana Murthy, they have designed using AIML (Artificial Intelligence Mark-up Language) to make response to queries. AIML is employed to make or customize alicebot that could be a chat-bot application supported ALICE free code

4. Existing System

In the earlier days students had to visit the college to enquire about details like courses, fee structure, admission 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 completely changing. Collecting the course details, fee structure manually will be a big 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

5. Drawbacks

- More time consuming
- Delay in response
- In the existing system we have only limited number of predefined queries.
- It cannot understand specific problems and cannot perform task for the client.

6. Proposed System

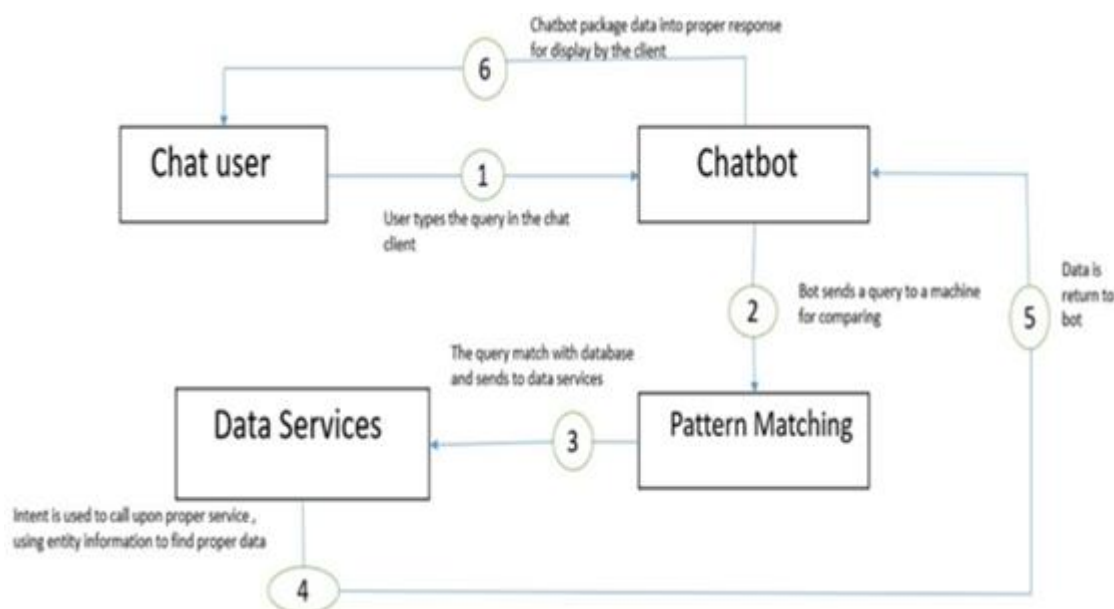
The main objective of this project is to communicate between user and college using chatbot. By using artificial Intelligence, the system responds to the queries asked by the student. The chatbot mainly consists of input, output and interface. The chatbot will take input in the form of text using natural language processing (NLP) technologies. The input will go to several steps like parsing, tokenization, stemming. Input will be parsed to the chatbot and this input

will be undergone to stemming and tokenization. Chatbot will give response to the query in the form of output. Chatbot will appear on the college website like how can I help you. By clicking on that we can pose our queries. There are many languages to build chatbot we should choose such language like which is having object-oriented concepts. In this project python language is chosen. Because it is user friendly. In this we use Artificial Neural Network algorithm, JSON as database and flask as framework.

Advantages

- It gives response in the form of queries rather than options.
- It provides 24/7 service
- Faster processing when compared to existing one.
- It takes less time to respond.

7. Architecture



8. Implementation

Implementation includes all those activities that take place to convert from old system to new system. The old system consists of manual operations, which is operated in a very difficult manner from the proposed system. A proper implementation is essential to provide a reliable system to meet the requirements of the organization. Chatbot is a web application. It is incorporated on the website of the college. User Interface is like it shows pop up like how can I help you? When user clicks on it shows a chat window. User can ask queries regarding the college, chatbot will respond to that query asked by the user. When the user asks query other than the college. Bot will respond like please ask the question regarding college only.

• User

This will enable all the user tasks, when user enters a query regarding college, he will get relevant response from the chatbot.

• Chatbot:

Chatbot will take input from the user it finds for relevant answer, when the query matches with output it will be displayed to the user

9. Results

In this paper we have seen how the proposed system is implemented and how it works.

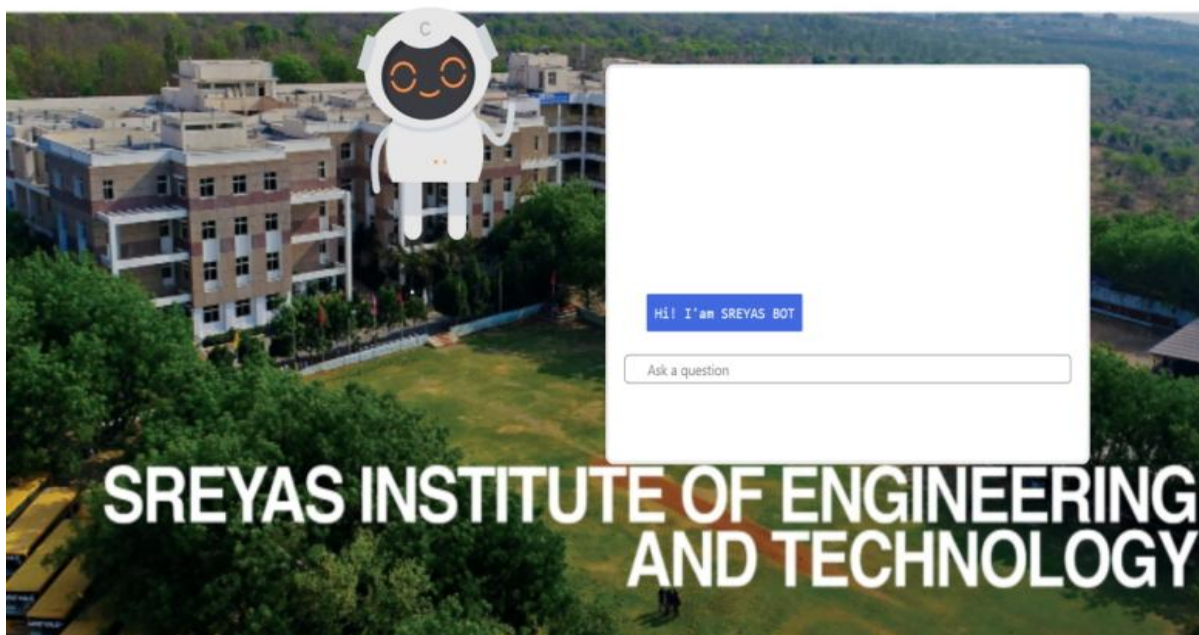


Figure 1: Homepage

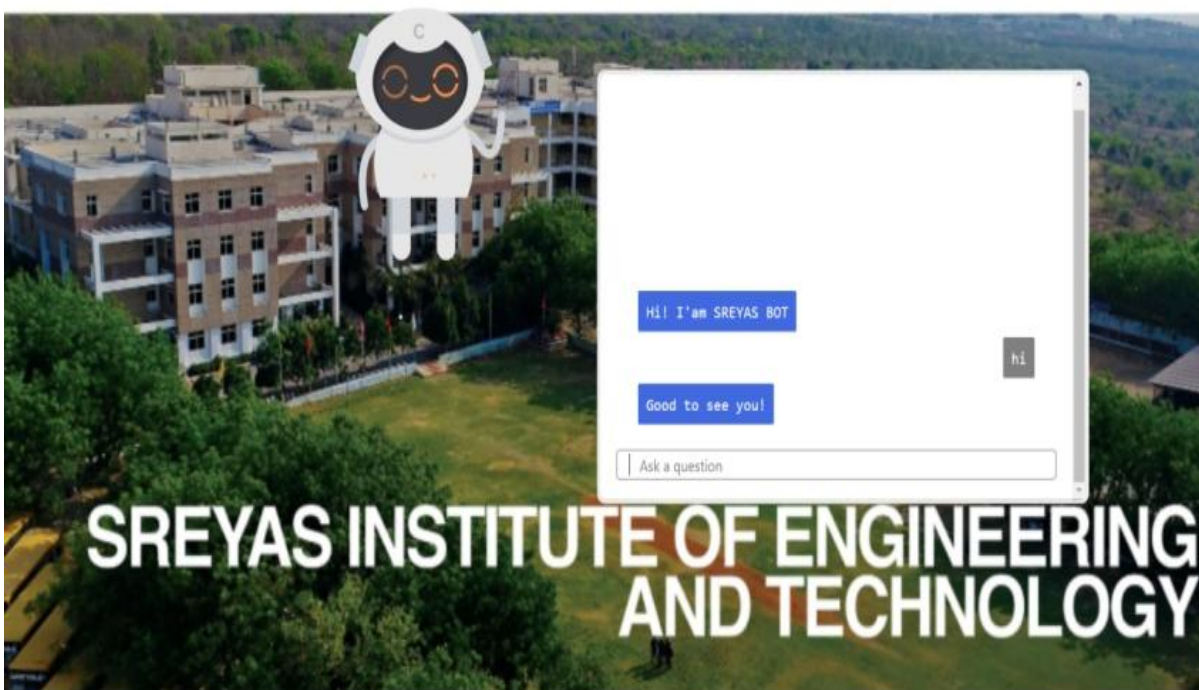


Figure 2: User Enters query

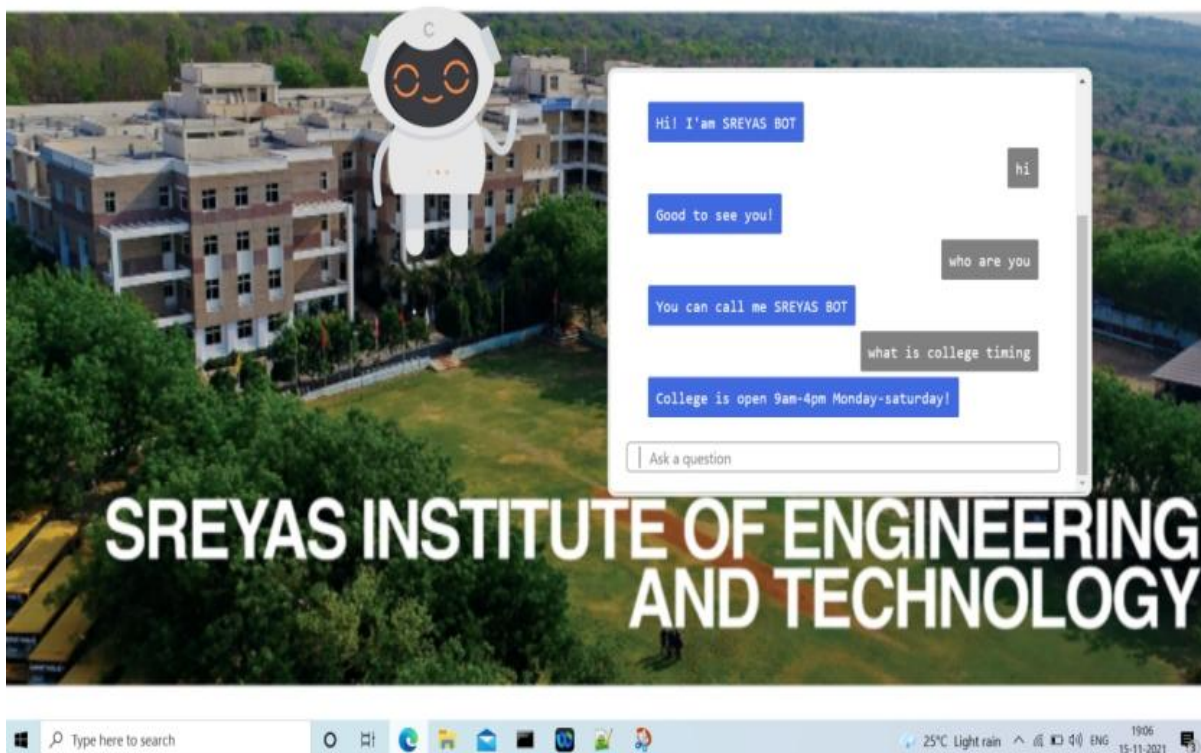


Figure 3: Chatbot replies to query

10. Conclusion

College enquiry chat bot we created is helpful in guiding students with correct information. It is advantageous for queries such as fee payment, list of courses, number of students, Canteen, Stationary, Library etc. Students get the information at their fingertips rather than visiting college. It improves efficiency by taking over tasks for which humans are not essential. It takes less time to respond. When student want to know information regarding college there is no need to go to college physically. He can know information from anywhere and using any device. It works 24/7. We can access the data anytime regarding college. We can know any information regarding college like Library, Canteen, Stationary etc.

11. Future Scope

- 1) It requires more rigorous data to handle all the questions which are out of script.
- 2) To improve the functionalities of College Enquiry Chatbot, in the future, the scope of the chatbot can be increased by inserting data for all the departments, training the bot with varied data, testing it on live website, and taking the feedback based on that we train the bot in efficient way.
- 3) Some of the new features which can be added to the bot are
 - Speech Recognition: Students can ask their queries verbally and get answers from the bot
 - Integration with services such as reset password, course enrolment
 - Integration with social media such as Instagram, Twitter

References

- [1] "Amazon Alexa-Build for Amazon Echo Devices", Developer. amazon.com, 2017. [Online]. Available: <https://developer.amazon.com/alexa>. [Accessed Sep. 12, 2018].
- [2] "Chatbot", en.wikipedia.org, 2010. [Online]. Available: <https://en.wikipedia.org/wiki/Chatbot>. [Accessed Jul. 10, 2018].
- [3] "Amazon.com: Online Shopping for Electronics, Apparel, Computers, Books, DVDs & more", Amazon.com, 2017. [Online]. Available: <https://www.amazon.com/>. [Accessed Sep. 12, 2018]
- [4] "Chatbot: What is Chatbot? Why are Chatbots Important?-", Expertsystem.com, 2018. [Online]. Available: <https://www.expertsystem.com/chatbot/>. [Accessed Sep. 11, 2018].