College Enquiry Chat Bot System with Text to Speech

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ABSTRACT

Chat bots are intelligent systems that interpret and react to users' questions in their native language. In a conversation, the chat bot reacts in the same way as a human would. It functions as a virtual assistant, and its accuracy is assessed by determining a correlation between user questions and chat bot responses. For a better user experience, the implemented Chat bot has two modes: text mode and audio mode. It provides an interactive approach of answering through voice messages when in audio mode. There is a long line at the inquiry window during the Institute's Academic Admission procedure. Even more challenging is the situation for parents who live in various cities, states, and nations. The purpose of this system is to give students and parents a place to ask questions and get answers via easy English language text messages or audio commands. Instead of queuing at an information desk to ask questions about the admissions process, students and parents will collaborate with a bot. Artificial intelligence (AI) and natural language processing (NLP) algorithms are used to create chatbots, which are intelligent systems. It effectively interacts with users and responds to their questions. Organizations, government groups, and non-profit associations are the most common users of dialogue/conversation operators. These conversational experts work for a wide range of businesses, from small start-ups to large corporations. There are a variety of code-based and interface-based chatbot development platforms available on the market.

Keywords – College Inquiry Bot, Classifier Algorithm, NLP, Chatterbox

I. INTRODUCTION

Students will be admitted to engineering after completing their 12th grade or completing a diploma programme. They had a lot of issues prior to enrolling. Students and their parents are concerned about a variety of admissions-related issues. When it comes to choosing a suitable engineering institution, students are often perplexed. They choose institutions based on a variety of factors, including prices and the previous year's admissions threshold. As a result, some students send me e-mails or call me on the

phone.. As a result, there is an unnecessarily large gathering of people waiting to be questioned. The admissions department frequently has trouble answering students' persistent questions. In addition, the college admissions department required additional people and funds to respond to all of the inquiries. The installed chatbot will answer users' questions, supply them with the information they need, increase the quality of service time, and make customers happy by offering clever solutions. It also boosts productivity by offering 24-hour support, reducing wait times at the help desk, and reducing human effort. Students can use their laptops or smartphones to communicate with the chatbot on the web. Students ask a variety of questions on admission specifics in plain language, and both can respond with correct answers. Customers can simply access the proposed application, and it responds to users at any moment. In order to improve the quality of service, the chatbot not only responds, but also self-learns and improves.

II. OBJECTIVE

A smart solution to resolve these questions, provide information as and when needed, enhance service and increase the number of customers will be created by a chat bot. It reduces individual variables included in the enterprise and can offer 24/7 hours of operation to improve efficiency. We plan to provide customers with a chat bot interface that can be accessible on the web and on any handheld computer.

III. RELATED WORK OR LITERATURE SURVEY

[1] Enhancing College Chat Bot Assistant with the Help of Richer Human Computer Interaction and Speech Recognition

Author: Sangeeta Kumari, Zaid Naikwadi, Akshay Akole

After preprocessing, they used stemming to remove terms that appeared at the beginning and end of the sentence. Special characters and numerals are removed during preprocessing. Following stemming, the leftover words are matched with keywords stored in a dictionary..

[2] "Review on Implementation Techniques of Chatbot"

Author: Nithuna S and Laseena

They are frequently sent by financial institutions, such as banks and credit card companies, as well as organisations such as online retail outlets and new businesses. These conversational experts are used in a wide range of companies, from small start-ups to large partnerships. There are various code-based and interface-based chatbot development systems on the market.

[3] "Chabot Application on Crypto currency"

Author: Qitao Xie1, Qingquan Zhang2

Many chatbots have been developed that provide a multitude of services through a wide range of methods. A chatbot is a brand-new conversational agent in the highspeed changing technology world. Secure and efficient system

[4] Preliminary Findings of using Chat-bots as a Course FAQ Tool

Author: Sue Inn Ch'ng Lee Seng Yeong

Students learn by asking questions and as instructors we encourage students to ask questions. However, not all questions are of equal importance . An advantage of bot platforms is that developers can also easily extend and integrate the conversational user interface into their program through the provided application programming interface

[5] Conversation to Automation in Banking Through Chatbot Using Artificial Machine Intelligence Language

Author: Sasha Fathima Suhel Vinod Kumar Shukla Ved Prakash Mishra

Chabot's are commonly used as tools for knowledge retrieval, such as product specifics extraction. Artificial Machine Intelligence is a very complicated topic. It involves creating machines that are capable of simulating knowledge.

IV. MATHEMATICAL MODELING
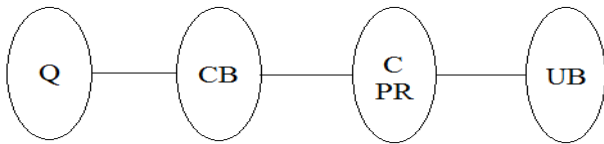
Where,

Q = User entered input

CB = preprocess

C = apply NLP chatterbot

PR = preprocess request evaluation

UB = chatbot response

Set Theory

1) Let S be as system which input image

S = {In, P, Op, Φ}

2) Identify Input In as

In = {Q}

Where,

Q = User entered input(text)

Identify Process P as

P = {CB, C, PR}

Where,

CB = Preprocess

C = apply NLP chatterbot

PR = Preprocess request evaluation

4) Identify Output Op as

Op = {UB}

Where,

UB = Predict outcome

Φ=Failures and Success conditions.

Failures:

Huge database can lead to more time consumption to get the information.

Hardware failure.

Software failure.

Success:

Search the required information from available in Datasets.

User gets result very fast according to their needs.

Space Complexity:

The space complexity depends on Presentation and visualization of discovered patterns. More the storage of data more is the space complexity.

Time Complexity:

Check No. of patterns available in the datasets= n

If (n>1) then retrieving of information can be time consuming. So the time complexity of this algorithm is $O(n^n)$.

Above mathematical model is NP-Complete.

V. EXISTING SYSTEM AND DISADVANTAGES

In existing system there is no computerizes system to identified the human query. Firstly, it is only suitable for the instance-level approaches that require an instance classifier, As we mentioned before, existing popular approaches of use with neural networks are treat separated instances as inputs, then use a deep neural network to transform them into embedding space.

Disadvantages:

It required internet connection must

VI. ADVANCED SYSTEM AND ADVANTAGES

The proposed system would help replicate the customer service experience with one difference that the customer would be interacting with a bot instead of a real person and yet get the queries attended and resolved.
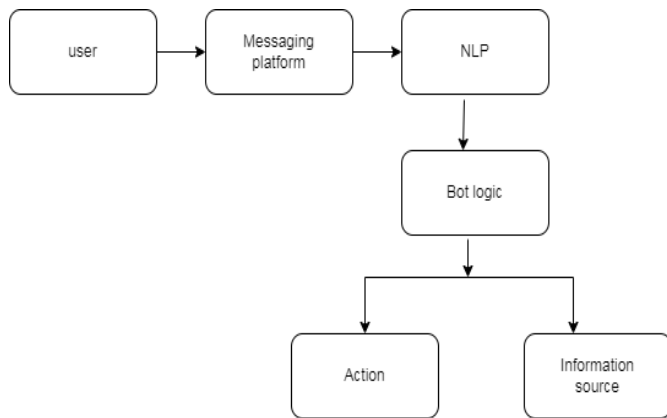
Figure : Advance System Architecture

Advantages:

✓ Confirming those infected is essential to manage and contain the virus successfully. Without reliable testing, it would be hard to determine the actual rates of cases. Thus, it is vital to identify what these available tests can and can't do to use them appropriately.
✓ Secure and efficient system.

VII. CONCLUSION

Any college or university can deploy a chat bot on their website to allow external stakeholders to ask questions at any time. And it would be quite beneficial to ease the admission process, as this chatbot can answer questions about state-by-state cutoffs, categories-by-category cutoffs, gender-by-gender cutoffs, and shift-by-shift cutoffs, among other things. Users can give feedback by tapping the like and dislike buttons in response to the responses to their queries. This information is saved in the backend and may be examined by the administrator to analyse the types of queries asked and, if necessary, enhance the answers. To test the chatbot's accuracy, the same query was posed in several different ways, each time modifying the wording of sentences and adding various exceptional characters and unrelated terms. The accuracy of BOT in detecting a specific query for various settings in which the user is asking can be increased, giving the user a more genuine feeling of speaking with a human counsellor. This bot can be created in a local language and multilingual at a later time.

VIII. FUTURE WORK

Chat bots are a constantly growing area of study in the field of computer science. If there are any flaws in input owing to human spoken language, such as a grammatical or context issue, bots may still be unable to understand what is being asked. Misinterpretation of any commands, whether due to misspelling or otherwise, can be improved further using powerful Natural Language Processing NLP techniques. The BOT can be improved till it passes the Turing test.

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