VELAMMAL
INSTITUTE OF TECHNOLOGY

Approved by AICTE - New Delhi
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION

CHATBOT IN PYTHON

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PROBLEM DEFINITION

Chatbots can basically solve any issues a customer or prospect may have. Previously chatbots have been used exclusively in this way for customer support. However, now the focus is shifting more and more to lead identification, activation and conversion.

From a marketing perspective, Chatbots take all the hard work you've done with your inbound marketing campaigns and make sure that every prospect that visits your site is activated and engaged. This means that you are maximising the potential opportunities present in every visitor to your site.

New tools, known as chatbots or virtual assistants, have recently hit the market with the goal of making human-computer connections easier. Virtual financial assistants, for example, are becoming increasingly popular. They can answer simple questions, adjust balances, and do a variety of other things. Virtual assistants - chatbot, are some of the newest tools in our industry, designed to allow humans and computers to connect in a natural way. Over the last few years, these technologies have become more intelligent, and they have become one of the most potent tools for getting things done in a modern office setting.

OBJECTIVES

Developers utilize these logs to analyse what clients are trying to ask. Developer s coordinate their with their client inquiries and reply with the best appropriate an swer with the blend of machine learning tools and models. Training a chatbot is very much faster and also on a large scale as compared to human beings. A cus tomer support chatbot is filled with a very large number of conversation logs whi ch help the chatbot to understand what kinds of questions should be asked and answers should be given. While a normal customer service representatives are given manual instructions which they have to go through with. The chatbots is b ased on three methods:

1. *Pattern Matches:* The pattern matches group of texts is utilized by the bots and it so it produces an appropriate response to the customers. The standard structured model used for creation of these patterns is "Artificial Intelligence Markup Language".
2. *Natural Language Understanding (NLU):* Finding the way to convert the user's speech or text into structured data is called Natural Language Processing. It is used to get relevant answers for the customers.

INTRODUCTION

The improvements in the fields of inter-networking and information technology h ave been intricate in executing an Artificial Intelligent systems. These systems a re drawing near to human activities for example choice emotionally supportive n etworks, robotics, natural language processing. Indeed, even in the artificial intel ligent fields there are some hybrid strategies and adaptive techniques that mak e increase complex techniques. That, yet these days there are additionally sever al Natural Language Processing and intelligent systems that could comprehend human language. AI systems learn themselves and retrieve insight by perusing r equired electronic articles that have been exist on the web page.

LITERATURE SURVEY

According to the survey on Chatbot Implementation in Customer Service Industr y through Deep Neural Network, the strategies for creating rules for chatbot hav e been advanced. strategy for creating chatbots has depended on hand-written r ules and templates. With the rise of deep learning these models were quickly re placed by an end-to-end neural network. All the more specifically DNN is a powe rful generative-based model to take care of the conversational response generat ion problems. This paper led an inside and out the review of ongoing literature, e xamining more than 70 publications related to chatbots published in the last 5 ye ars. based on a literature survey this examination made a comparison from chos en papers according to the strategy adopted. This paper also introduced why cur rent chatbot models fail to take into account while generating responses and ho w this affects the quality of conversation.

PROPOSED SYSTEM

This college chatbot system is a web-based application that gives responses to user queries. The system architecture of the chatbot system is shown in the first chatbot responds to the user by greeting him or her and then asks a user to logi n into the system by providing his or her mail. then the user finds the button in th e UI which corresponds to the different categories of the college. after going thro ugh the buttons the chatbot system asks the user is it helpful or not with the resp onse. If the user is not able to find the required response he or she can continue the chat with the college chatbot system by briefly elaborating their queries. The n chatbot system applies an ML algorithm to break down the user queries.

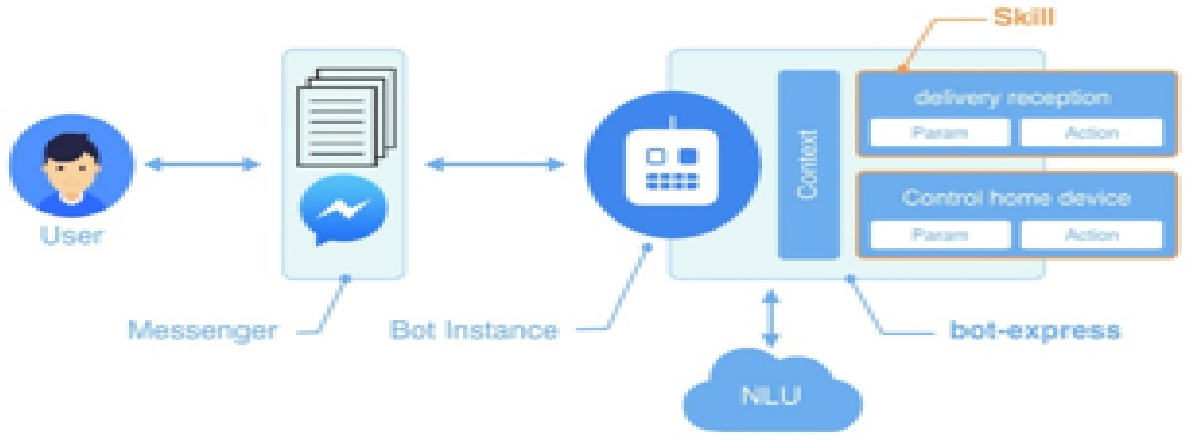

Fig 1 : Architecture Of Chatbot

1. *Login:* After clicking on the chatbot provided in the college website. the chatbots system greet the user and request the user to provide thier mail ID. After that chatbot start chatting with the user.
2. *Botindex:* When the user proceed to choose chatbots to get an answer to his or her query the chatbot display a page to select few options regarding college and identifies his or her category of query. If the user gets his query cleared and then the task of chatbot is completed.
3. *Asking Queries:* If the user is not satisfied with the rule-based response then the chatbot system request to enter his or her query in word and the suitable response is given by the chatbot. the user query is first checked in the database. if the query is valid then a suitable response is given to the user. If the query is invalid then the chatbot request user to ask queries regarding the college.
4. *Providing Feedback:* After the chat, the chatbot takes feedback from the user. feedback is taken in order to know the user's experience with the chatbot. if the user gives feedback positively then the bot thanks the user and provides a box to enter any further queries. if the user gives feedback negatively then the bot asks the user to elaborate his or her query in order to respond. username of the user is also stored and helps the admin to track user actions.

FLOW CHART

On the other end, the admin who is responsible for maintaining the college chatb ot system up to date has several functions to perform such as adding the query t o the database modifying the data, deleting the data, viewing feedback given by the user, and so on.

a. *Login:* System has only one Admin has to login by providing his or her userna me and password entered password is encrypted using AHA-256 encryption alg orithm. The login details are validated against the username and password whic h are stored in the database and are encrypted using the AHA-1 encryption algo rithm. if the details provided are matching with the database then the admin can get access to the college chatbot system.

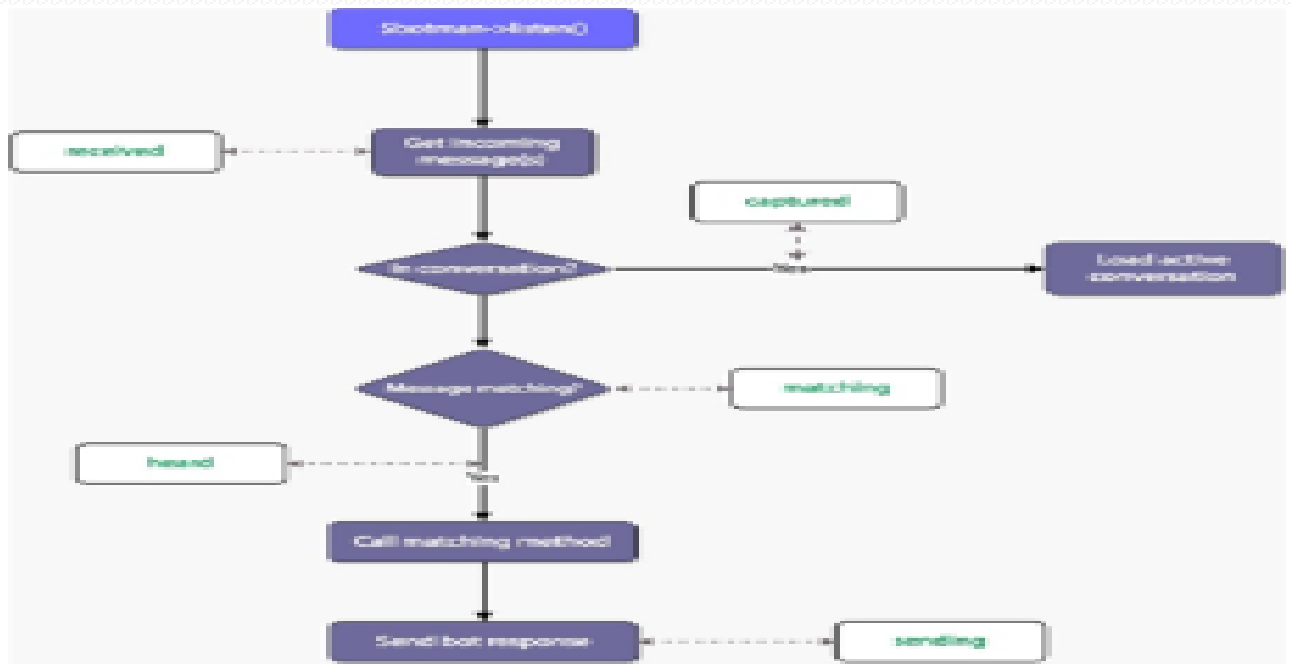

Fig 2 : Flowchart Of Chatbot

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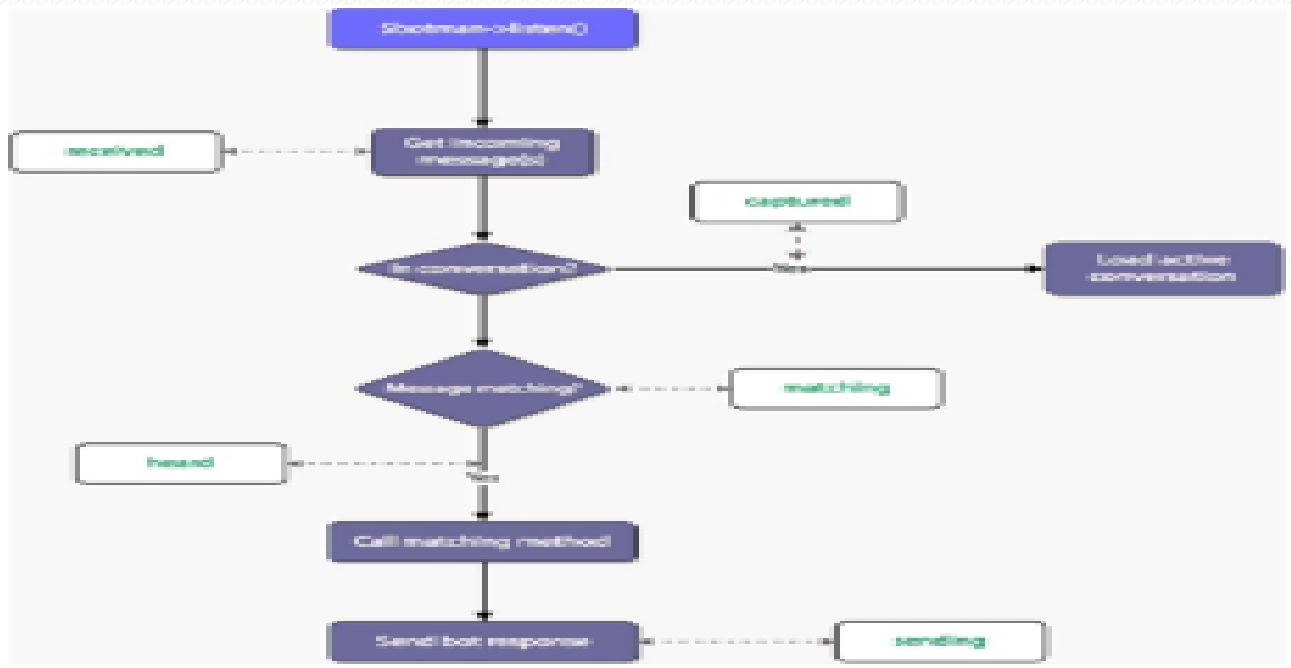

Fig 2 : Flowchart Of Chatbot

b. Add Query: If the admin proceeds to add the dataset then the chatbot allows t o add the query in three option that is the addition of question addition of answer and selecting the respective category into which dataset is added.

c. View Dataset: If the admin proceeds to view the dataset then the chatbot allo ws to view the dataset category-wise. The chatbot also gives an additional two o ptions that delete the dataset and modify the dataset.

d. Delete Query: If the admin proceeds to delete the query then the chatbot allo ws to delete the query from the view page itself by selecting the respective categ ory.

e. Modify Query: If the admin proceeds to modify the existing query then the cha tbot allows to modify the query from the view page itself by selecting the respecti ve category.

f. Change Password: If the admin wants to change the password then the chatb ot allows to change the password. to change the password admin must provide t he old password and new password and then re-enter the new password in the change password webpage. thus creating a new password that is encrypted and stored in the code.

CONCLUSION

In this project, we made a college-specific chatbot system that can be custom an d fits in an education domain chatbot the addition of this chatbot system in the c ollege website will make the webpage more user interactive as it responds to the user queries very accurately as it is a domain-specific chatbot system, and furth ermore we had investigated our college chatbot system design stages. a few diff erent techniques by which the precision of the chatbot system can be made bett er. gathering feedback from the potential user can be helpful in developing the c ollege Chatbot system ultimately servicing the user queries in conclusion we hav e made a chatbot in python that can understand user queries and reply accordin gly. In the intent file of our chatbot on we can add more patterns and improve pat terns which will be helpful when replying to the users and improve the accuracy of our chatbot DL enabled chatbots are becoming more and more popular becau se of their applications and they can tackle all the problem. it can also be very h elpful in teaching and has a lot of applications in teaching the visually impaired.