

System Control ChatBot

N. Lokeshwari¹, G. Harsha Vardhan^{2*}, G. Rahul³, A.V.V. Manasa⁴, N. Mounica⁵

^{1, 2,3,4,5} Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam

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Abstract: Chatbot is another new way for people to interact with a computer system. Traditionally, to get a reply by a software program involved using a search engine. Humans simply ask questions to the chatbot to get answered by the chatbot in a most efficient way. This Paper Builds a general purpose that makes conversations between user and computer. Initially the Chatbot has Given all instructions Related to your Computer. If User doesn't Know How to Work with a computer he can ask any related thing about it. The Bot we are trying to build is related to computers i.e. Windows OS version 10 and Above.

Keywords : Chatbot , Generative-based model, Retrieval-based model.

I. INTRODUCTION

A chatbot is a computer software that can perform its conversation with a user in natural language through message applications, mobile apps or through telephone. A chatbot is described as one of the most advanced and promising interactions between humans and machines. Chatbot technology is advanced such that it recognizes questions through voice and answers it accordingly. A chat robot which can communicate with a person, thus a chat bot is also called a chatter bot. A computer program that simulates human conversation, or chat, through machine learning. Typically, a chat bot will communicate with a real person, Chat bots are used to automate customer services and reduce manual tedious tasks performed by employees so they can spend their time more productively on higher priority tasks. Chatbot technology initially began in the 1960's to determine whether a chat bot could be portrayed as a human. Throughout the 1980's there was an elevated amount of research carried out on natural language interface which leads to the development of sophisticated chatbot architecture such as A.L.I.C.E (Artificial Linguistic Computer Entity). This chatbot architecture is one of the earlier chat bot developed in 1995 by Dr. Wallace which is now open source. This chat bot is we can create through interaction as it will learn from previous interactions to create its knowledge base.[1]

II. LITERATURE SURVEY

Data mining is the method of identifying similar patterns in huge data sets. In computer science and statistics where data mining is a part of it. Data mining aims to extract useful information from a data set and transforms the information into understandable and unique structure for further use. The data mining step identifies different groups in the data, which can then be used to obtain more accurate prediction results by a decision support system, Our project which is voice

recognition chatbot is a model which is a good conversational chatbot with whom the user can interact in very simple and easy way as it is a retrieval based model chatbot where the chatbot model pick a response from a collection of responses based on the given query. This bot responses from a finite set of predefined responses or pre existing information. [2]

III. RETRIEVAL-BASED MODEL

The Retrieval-based models based on the query generated, from a group of responses it chooses an appropriate response. We need to worry about grammar and spelling mistakes because the retrieval model does not generate new answers. Generally, The Retrieval-based models pick a response from a collection of responses based on the given query. Retrieval based bots work on the principle of directed flows or graphs. From a finite set of predefined responses the chatbot is trained to take the best response among the generated responses. The responses generated in the Retrieval model are entered manually, or based on an idea of pre-existing information. Retrieval based bots are the most commonly used chatbots that you see today. We can decide the tone of the bot, and design the experience. [4]

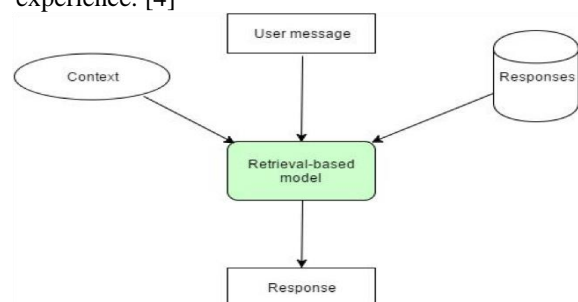


Fig (1)

IV. GENERATIVE-BASED MODEL

Generative models don't rely on predefined responses. They generate new responses from scratch. Generally, Generative models don't rely on predefined responses. They generate new responses from scratch. Generative based models are typically based on Machine Translation techniques, we translate a given query that is input to an output response, but not translating from one language to another. We based our generative models on the sequence to sequence neural networks. This network was initially released for machine translation, but has also proved to be quite effective when it comes to building generative chat bots. Generative models are good for conversational chatbots with whom the user can directly interact with another user. Generative chat bots also require a very large amount of conversational data to train. Customers usually do not always have this large amount of data readily available. [2]

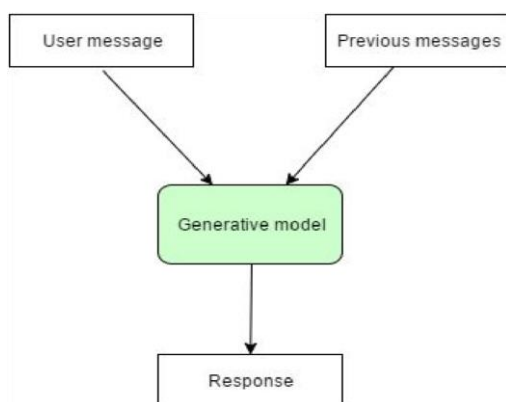


Fig (2)

V. ARCHITECTURE

System architecture describes the overall structure of the system and the way in which the structure provides conceptual integrity. Architecture is the hierarchical structure of a program component and the manner in which these components interact with each other. In this system the one who wishes to use the chat bot has to register with their username, email, phone no, and have to set a password. After successful registration they will login with their respective credentials. The details of the user will be stored in a database. Users have to give input as text or speech then the chat bot will give separate response generation and response selection modules, as shown in the diagram above. Message processing begins by identifying the main "keyword" i.e. notepad or camera etc. After identifying the main keyword it processes and executes the particular task. Typically it is a selection of one out of a number of predefined intents, though more sophisticated bots can identify multiple intents from one message. It stores all the information regarding the previous

users of the chatbot system and stores in a database . All these responses should be correct according to specific input functions.

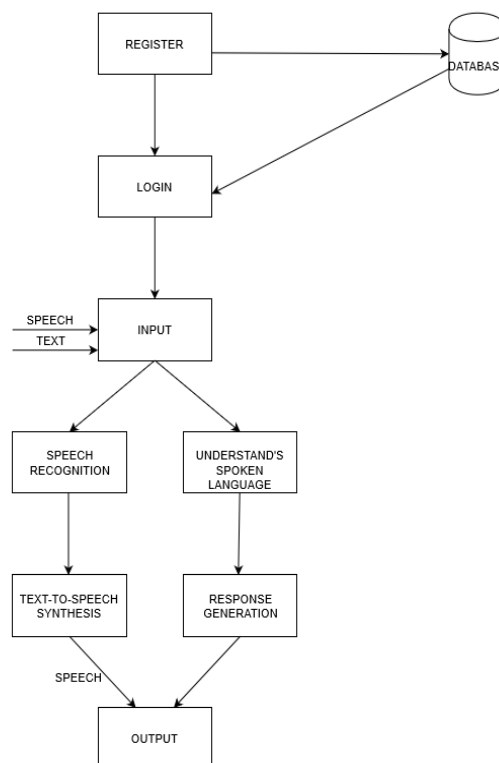


Fig (3)

VI. METHODOLOGIES

The algorithm used in our voice recognition chatbot is "Naive Bayes Algorithm". It is because like the "Naive Bayes algorithm", we have implemented it using predefined existing data, and also used the concept of Machine Learning. Like a Machine learning algorithm only the predefined existing data was trained to perform the given task, and to execute correct output. In this algorithm, when we say a sentence it divides the sentence into individual words and finds the main "keyword" of our sentence. In our voice recognition chatbot also we are using the same concept to determine and to find out the main "keyword". After finding out the main keyword it performs the particular task of the given sentence. we can ask the query either through text or speech. Then it divides the sentence into groups of words and identifies particular keywords and executes the particular task.

VII. EXISTING ALGORITHM

In the "Existing Algorithm", the Chatbot receives the question or some format of message through voice that is actually through "Humans voice". When chatbot receives any question or message through voice, it just automatically displays output. In the existing algorithm it does not support the idea of explaining each and every point of how the application is being opened or how it is being called and how the process is working. When we say something through chatbot, the chatbot does not reply us through voice, it just displays the answer to our question and sometimes we need to search for the best and appropriate answer. The "Existing Algorithm" just facilitates us to question through "voice" and the advanced technology of explaining clearly about the application or about the task is not justified and it does not answer our question through voice, simply displays the required output in simple format.

VIII. PROPOSED ALGORITHM

In the "Proposed Algorithm", we are implementing the extension to the "Existing Algorithm". When chatbot receives the question or any format of message to its system through either voice or through text, our "Proposed Algorithm" will support the idea of explaining each and every step of the given question through voice and it explains everything from the beginning to the end. If we ask through chatbot to open any of the applications, it explains us how to open the application through voice and parallelly it shows us each and every step how it was being opened and justifies our questions with appropriate answers. The "Proposed Algorithm" also displays output with correct and exact format. In our "Proposed Algorithm", it supports only inbuilt sets of algorithms. The way in which our "Proposed Algorithm" is represented as for example if we want to open any of the application i.e "camera", it first mainly identifies the keyword "camera" and it goes to the window icon and clicks at the windows logo and opens the camera. Another example is if you don't know how to change your ip address then you can ask the chatbot then it will explain it step by step and if you want to change the ip address then it will change the ip address what you told.

IX. FUTURE SCOPE

It takes practice and a deeper understanding of underlying concepts to get the design right and build bots that give users a great experience. Chatbots have limited language support. They do not support multiple languages, dialects and do not understand colloquial usage. Hence there is a great scope for removing such language barriers in future chatbots. In the near future the capabilities of chatbot

would increase and they can understand multiple languages.

X. CONCLUSION

This project builds a chatbot which is reliable, cost effective and reduces users waiting time. chatbots have become important in various domains such as scientific, educational, commercial. The widest application of chatbots is in e-commerce for automating customer service. Apart from its advantages there are also some disadvantages of chatbots such as losing of memory especially in poor memory bots which results in retraining of models. a voice recognition chatbot is a model with whom the user can interact in a very simple and easy way as it is a retrieval based model chatbot where the chatbot model picks a response from a collection of responses based on the given query. This bot responses from a finite set of predefined responses or pre-existing information. We focused on text based and voice-based speech. Finally, we achieved to give any set of instructions to the chatbot that performs that operation optimally. Mainly we are focused on the voice type message that can directly type the message or text into any document file (notepad, word, pdf file etc. There is more to building chatbots and conversational UI than just plugging tools, services, and data together. Chatbots are a big step forward in enhancing human computer interactions. However the widest application of chatbots is in the field of e-commerce for automating customer service. Chatbots help to improve customer relations as well as drastically reduce human efforts.

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