

Foodmesh : An Intelligent Chatbot

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Abstract— Chatbot is a program that interacts with the user using natural language .It is designed to be the virtual assistant, education purpose, helping one to choosing best product, entertainment purpose and also helping user to complete task ranging from asking questions. Nowadays chatbot has become more popular in business area because it reduces customer service cost and handle multiple user at a time. Many customer want to order some food or to visit hotels but might not have a particular hotel and food in mind. The proposed system provide an interactive chatbot which helps user to choose best hotel based on their choosen food category. System will make use of chatterbot and List Trainer which provides best outcome for the user defined queries.

Keywords— Artificial Intelligence, Chatterbot, List Trainer, Machine Learnin.

I. INTRODUCTION

Chatbot is a trending application which has made by an Artificial Intelligence. Today's era is having many web based services like E-business, Entertainment, Virtual assistance and many more. There is drastic increase in the world of web service, where everything is now getting associated with web. It is very user friendly approach to avail everything to doorstep. There are different types of customer service available like live chat support service, phone (telephone) services. But for all such support services provided by human to human takes time to answer customers query. As the number of clients increases the waiting time increases as well, which results in poor client satisfaction [2]. Basically, there are two types of Chabot's – unintelligent ones that act using predefined conversation flows written by people and intelligent AI Chatbot's that use machine learning [10]

Machine learning is an application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed. Machine learning focuses on the development of computer programs that can access data and use it learn for themselves [13].

II. LITERATURE SURVEY

2.1 Android Based Educational Chatbot for visually Impaired People [2].

In this paper author proposed the educational chatbot specifically for visually impaired people. This android application provide result from predefined enteries and also from external resources which is wikipedia. This applicaion uses Media Wiki API (Application Programing Interface) to link with Wikipedia. So user can able to search any topic. It also includes AB library which is provided by the ALICE(Artificial Linguistic Internet Computer Entity).This chatbot uses voice recognition for input and speech for output. So it is easy or visually impaired people to use this application.

2.2 Real World Smart Chatbot for customer care using software as a service (SaaS) Architecture [3].

In this paper author explained how chatbot will analyze messages of each ejabberd users to check whether it is actionable or not. If it is actionable then chatbot will have conversation with the users and help users to resolve the issue by providing human way interaction using LUIS and cognitive services. To avoid the unnecessary traffic, this services will help in such kind of applications.

This paper proposes a Robust, Scalable and Extensible architecture with technologies stack consisting of ejabberd server, AWS web services and Chatbots. In this paper, the ejabberd server will handle the chatting part, the AWS web services will analyses the messages to check whether any actionable message has come and the Chatbot will act as a customer representative to resolve the issues the customer has been facing.

2.3 Automatic Question Generation from Children's Stories for Companion Chatbot [4].

This Paper focus on developing a question generation technique based on children's tales. Part-of-Speech Tagger identifies part of speech of each word, such as noun, verb, adjective, and so on. In our system, we pre-processed the sentences by adding tags, which were also features of the word, to each word through Part-of-Speech Tagger. Logistic regression statistically analyzing data which is also used to understand the relationship between variables, suitable for the problem of general binary classification.

A Dependency Parser analyzes the grammatical structure of the sentence and that provides a view of relationships between words and words. Logistic regression is a method of statistically analyzing data which is also used to understand the relationship between variables. ranking model is to rank the questions generated from the question generation system. It filters the questions and removes those with lower quality, in order to increase the performance of the system.

III. PROPOSED SYSTEM

Proposed system is a conversational chatbot which provide answers for queries asked by user related to food and hotels. It has the capability to get the input as both speech and text format from the user. This system is useful for visually impaired people also because it can take input as voice. Output of this system will be given as text or speech format. From the user's queries system will generate the related output as in the form of classification. User can get the all information about hotels and also it will recommend food and hotels based on user responded queries.

The system flow diagram is shown in fig 1. It shows how this system works.

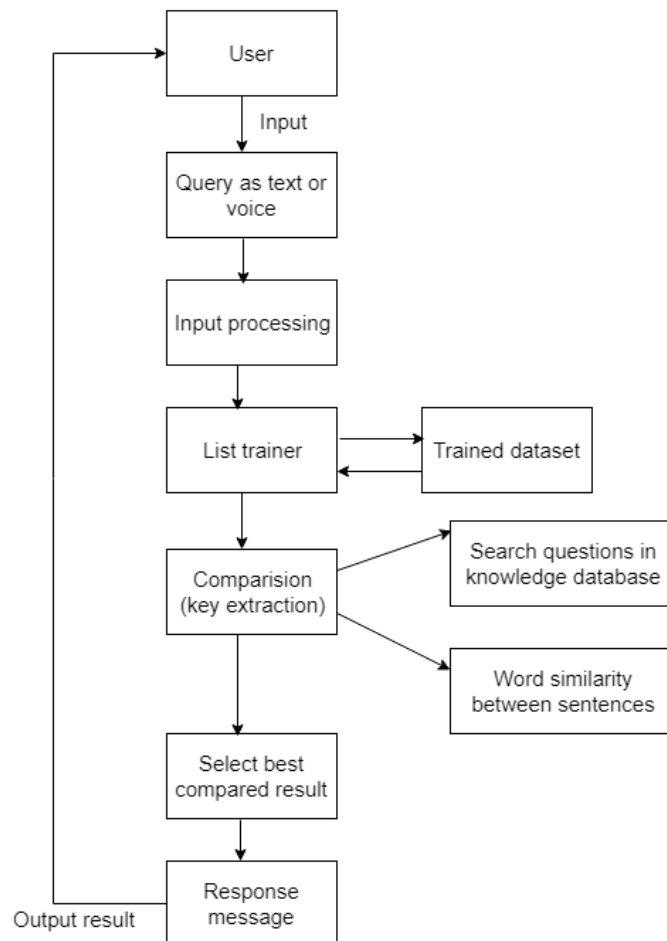


FIG. 1: System Flow Diagram

The system will take input from user as text or voice. If user input is text then it will save that text into a variable and if user input is voice then first it will convert that voice into text with the help of gttts(google text to speech). Then the next step in system flow diagram is input Processing here, that variable in which text is stored is going to compare with all the user defined queries in .yaml file.

The list trainer will be trained to the database. After that logic adapter in chatterbot will perform two operations. First operation is that, it will select a known statement that most closely matches to the input statement and the second operation is that it will return a known response to the selected match and generate confidence value based on matching. After that it will return a response from logic adapter which generate highest confidence value. Finally user will get output as best compared statement in text or voice format.

IV. EXPECTED RESULT

Chatbot is implemented to meet the customer needs according to hotels. Chatbot is based on chatterbot for food and hotel recommendation. This will help user to get information about particular hotels and their services like speciality of hotel, ratings, approximate cost for 2 person, availability of services, updates regarding to offers in hotels, user can also see menu card of particular hotel, their closing and opening timings etc.

Snapshot of propose system is shown in fig 2.

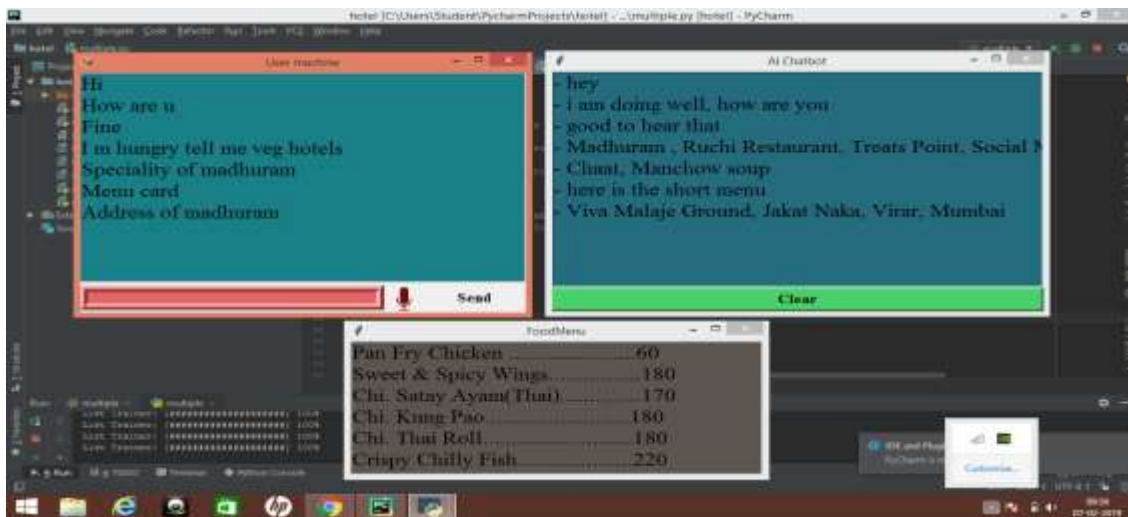


FIG. 2: Snapshot of propose system

V. CONCLUSION

In this paper we proposed the food recommendation Chatbot specifically for visually impaired people and it can also be used by normal people. This Chatbot uses the text and voice recognition for input and text and speech for output. So it is easy for visually impaired person to use this application. It can provide result from database. So user can able to search for any hotel.

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