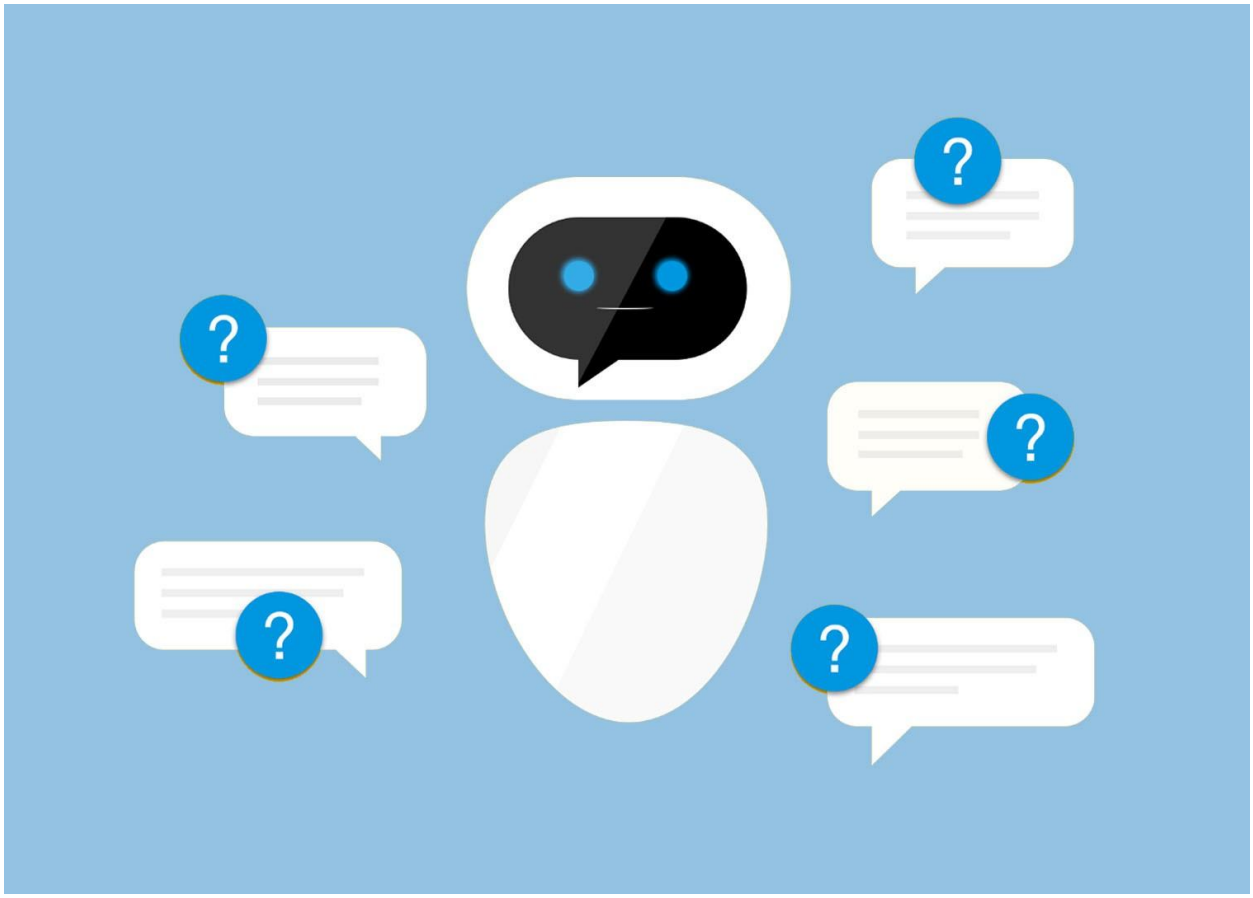
DLithe Training and internship

TalkBot

A simple bot capable of conversing



By:

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Introduction

A chatbot is a computer program that simulates human conversation through voice commands or text chats or both. The talkbot programmed by myself is capable of talking human voice commands and gives appropriate replies .Apart from conducting a normal conversation the talkbot can also provide information on current time of day and make you laugh with its jokes if requested .

Requirements

1. SpeechRecognition : Speech recognition module is used to take voice inputs from the user .This module is used to convert user voice input into text form which can be used to process the replies .
2. Python text to speech (pyttsx3):This module is used to give the replies to the user in the voice format.
3. PyAudio :PyAudio module is used to handle audio related synchronization required for audio to be played back .
4. Python's datetime : Used in the program to return current time .
5. Pyjokes :Pyjokes module is api for jokes . It can give neutral or general jokes and also a special categorical Chuck Norris jokes.
6. Chatterbot :Chatterbot is the heart of the talk bot .This package is used to generate the replies to be given back to the users which will be later converted into audio form .
7. Apart from all the above mentioned software requirements ,a Microphone is a must to get the bot up and running.

Implementation

Initially a chatterbot is set and a name is given to it .In my case I have named it "Siri".Then this bot is trained to give appropriate replies in english language using the chatterbot-corpus trainer .

A talk function is defined using python text to speech module.

After the chatterbot setup the following steps are implemented.

1. Using the speech recognition module we set up a listener and configured it to listen to the user through one of the microphone inputs .
2. Using the google recognizer which comes along with the speech recognition module we obtain the text version of the users audio input .
3. Feeding this text input to the chatterbot to generate the replies to the user .
4. The replies from the chatterbot are converted into audio using the talk () function earlier defined .

Siri's Special feature

- Apart from these, if a user wants to get information about current time then he has to use the bot's name ("Siri") as a keyword and include the word "time" in his voice command.

  For example :

  Siri can you tell what is the time now ? or Siri Time or Siri can you update me about the current time.

- The user can include the keyword joke in the voice command preceded by the bot's name i.e Siri ,to get a joke in response .Also if a user specifically needs a Chuck Norris joke he can include it in his voice command .

  For example :

  Siri Can you tell me a joke or

  Siri a Chuck Norris joke and so on ....

Conclusion

The talk bot developed overall capable of generating replies as per the users voice input .A very simple and basic implementation of AI can be observed in the project .Also apart from simplicity its high effectiveness is another aspect .

Errors faced :

- Installation of the modules :The modules have specific internal requirements .To overcome the issue a clean installation of the modules in a new and fresh anaconda environment only for the talk bot program will solve the issue .

References :

https://www.geeksforgeeks.org/python-text-to-speech-by-using-pyttsx3/

https://www.geeksforgeeks.org/speech-recognition-in-python-using-google-speech-api/