Contents

Abstract:

The Project is all about virtual Assistant which is like any usual Assistant which works for us but, here the machine will work as an assistant. It is just like Jarvis in Iron Man movie. We got this idea from there. This will take command as speech and try to complete the assigned work. Some of the properties of the virtual assistant is auto login, browsing, text to speech, handle internal software and applications and searching on Wikipedia and fetch the summary in two lines. The whole project is based on Python and we have used different types of module as speech-recognition, datetime, selenium and many.

Introduction:

The assistant is one who gives assistance in your work, who makes your boring work funny, easy, and simple. Let's understand this with examples. In **Iron Man** movie you must have notices about Jarvis, which works for him on his command it shares all the information just on a command. Even you know about Google assistant and Siri (Apple). In today's era we all want to make our work simple and fast. We like automation of most of the things so that we can save the time and use that somewhere else.

In this project we got ideas from all the above examples and automate some of the things like **browsing, Wikipedia, YouTube, Music, social sites.**

As we give commands to **google assistant** in the same way we must give commands here and it will complete the tasks. In our project we have used bunch of if else statement. Usually the famous Assistant like **Google** and **Siri** they use machine learning algorithm instead of all the basic statements. But this is just the **fundamental** level of AI which bound us to use multiple if else statements.

.

Literature Review

AI personal assistant is the need of today's era. Apple and google have large installed bases of users on smartphones and Microsoft has for the desktop and PC. Amazon has large install base for smart speakers and now a days it is also working on smart home where everything will be done by just a command.

Some of the examples that Amazon has it's so many products like Amazon Alexa, Amazon echo Google has Google home and Google assistant and Apple has Siri. Now a days Apple is working on making Siri smarter and it has also bought Xnor.ai for the same. This clearly shows the future of Ai personal Assistant. Even Amazon is working to make Amazon Alexa smarter and for the same he has everything open so that any developer can go there, login and start modifying and making best using all the basic things which is needed.

Now a days it is very common to listen about smart home Now a days Google and Amazon are working on these. There is also a video on YouTube which clearly shows the map of future home where Mark Zuckerberg was showing that how the home assistant deals with the task.

Smart cars which also works on voice. These also shows that people want to automate the things more and more.

Amazon Lex was opened for the developers in 2017. it involves natural language processing. It is open for the developers as I have discussed above.

Radio Rex was the first voice activated Toy after that IBM shoebox which was able to recognize speech and until now it has taken a great part in our life

According to Harvard Business Review the Ai has contributed a lot in the economics. It is just like economic revolution and it is also said that until 2020, 85% of the customer relation will be managed without humans. So, who will do the work? the answer is very simple that is AI virtual Assistant.

Proposed Methodologies

We have used some of the concepts for automate **music** in laptop or desktop and it will automatically play the first song after opening the songs folder. We can also change it to any song we can use the random method of python to choose any song randomly. In this we have used OS module in python to select the folder and file.

When we need to search something on Wikipedia, we just say **search something on Wikipedia** and the concept in this project is in such a way that it will fetch the summary of the query in two lines and speak it. Which is the property of Wikipedia module in python

To open any website on google we have used two modules **selenium** and **webbrowser** which helps to open any website followed by link.

A new concept in this project which uses **selenium (webdriver)** to automate the login in fb which is just an example that how we can make anything simple. To remember the password and Username of many websites is really just like remembering more and more contact numbers so we can use this just like phonebook we just need some security with password which can be done with getpass() method which uses the

concept of prompting the user for a password without echoing. Which is secure way for entering password.

We have used Pyttsx3 for converting text to speech. We can also replace with **GTTS** (Google Text To Speech) but pyttsx3 requires less memory as there is no need to save speech mp3 file which is a compulsory part of GTTS. We have also used speech recognition module which helps us to use mic as source for taking the command as our whole project is dependent upon the command of the user.

We have used a function name **wish ().** It takes the help of datetime module in python to get the time by the help of which the system will greet according to time.

We have used the concepts of try and except which is a compulsory part for the task where there is a hope for error. It helps us to show that whether the statement is working well or not if not, then what is the error

Result and Discussion

This project has some main parts

1. Text to Speech
2. Greeting according to time
3. Automate login
4. Visiting social sites
5. Automate music system of PC
6. Wikipedia
7. Simple Query

Algorithms used by this project is deep neural networks, Natural language Processing, Speech Synthesis, and speech recognition.

Deep neural network is just like the neural networks of human brain which has the property to connect the things with each other and Natural Language Processing Allow the machine to understand what we speak. Speech synthesis allow machine to speak and speech recognition, which is cause for the for the machine to catch the words, Phrases and sentences.

Conclusion

This project can automate the task like greet according to time, converting the text into speech and it uses Microsoft 'SAPI5' which is Speech API for speech recognition and speech synthesis. Automate Login, music websites and Wikipedia. This is just the fundamental of AI personal assistant which can do the above task easily. In this way we can add up more query to make it more useful and using some machine learning techniques it will be easy to decrease the complexity.

Reference

1. https://en.wikipedia.org/wiki/Microsoft_Speech_API
2. https://en.wikipedia.org/wiki/Virtual_assistant
3. https://dev.to/coderasha/build-virtual-assistant-with-python-automate-tasks-46a6
4. http://carrefax.com/new-blog/2018/2/19/automate-the-browser-with-selenium