Virtual Assistant to Follow Internet and PC Commands

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Abstract - : A virtual assistant, is an application program that understands natural language voice and completes tasks for the user. The purpose of this assistant is to perform internet and desktop command for user. Not everyone is a technical person; they don't know what is CMD and how to give command. This assistant will perform command simply through voice and person will not have to type everything manually. In our project we will only focus on system that works on and for PC only. This assistant is in software format which user will able to download and install in his/her PC.

Key Words: AI, python, Assistant, Speech Recognition

1. INTRODUCTION

With the development of Artificial Intelligence, they are no longer a machine but a person whose primary job is to help his employer to do a specific online job virtually. Most of time this person is residing in another part of the world. They can interact with user through voice, gestures, facial expressions, etc. Thanks to that and IT progress we have made in virtual assistant. So, what can a virtual assistant do for a user? Nowadays pretty much everything. Starting with morning wishes, giving him the newest news right away, informing him about the weather. The work on creating and improving such personalized assistants has been going on for a long time. These systems are constantly improving and improving, go beyond personal computers and have already firmly established themselves in various mobile devices and gadgets. One of the most popular voice assistants are Siri, from Apple, Amazon Echo, which responds to the name of Alex from Amazon, Cortana from Microsoft, Google Assistant from Google. In this software we tried to study virtual Environment and virtual Assistant. It will be a look-at examples of intelligent program with English language that are readily available. Nowadays virtual assistant is providing facility, to measure temperature, weather forecasting, web searching, open files & applications from personal computer and other features.

2. LITERATURE SURVEY

Virtual assistant has a long history with several waves of major innovations. Speech recognition for dictation, search, and voice commands has become a standard feature on smartphones and wearable devices but it came a long way. The Base of Virtual assistant is started from speech recognition.

1) In 1990 digital speech recognition became a latest feature for personal computer. Much later it set the foundation for smart virtual assistants.

2) In 1997 the software was made that could recognize and transcribe natural human speech.

3) The first modern digital virtual assistant installed on a smartphone was Siri. Its aim was to perform tasks like sending a text message, making phone calls, checking the weather or setting up an alarm. Over time, it has developed to provide restaurant recommendations, search the internet, and provide driving directions.

4) In November 2014, Amazon announced Alexa alongside the Echo.

5) And now AI has become more common with new features. As more data becomes available for a given speech recognition task, the natural way to improve recognition accuracy is to train larger acoustic models.

3. MODULES

A. WIDGET

WIDGET is an application to provide settings to AI. It includes setting path to access folders in PC like for playing movies and song. This path from widget code goes to AI code. You can change path according to you any time. You can even name AI yourself like Jarvis, Friday etc. After setting all these things you can start running AI.

B. AI

Personal assistant will be able to take input from user with help of voice command. This can be anything like getting any information, operating computer's internal files, etc. This command is first recorded and converted to string form by program using python's speen_recognition library. Then that string is striped so that it can be performed (Example: If we gave command like "Search Python Programming", so the program will strip the word Search and string will become "Python Programming" that's what we have to search). If that command is understood by personal assistant, it will respond on that command with proper search, else personal assistant response to user with error message. Through this the user can search and perform any command. User can give any name to assistant as per their choice. And assistant will only respond on that user given name.
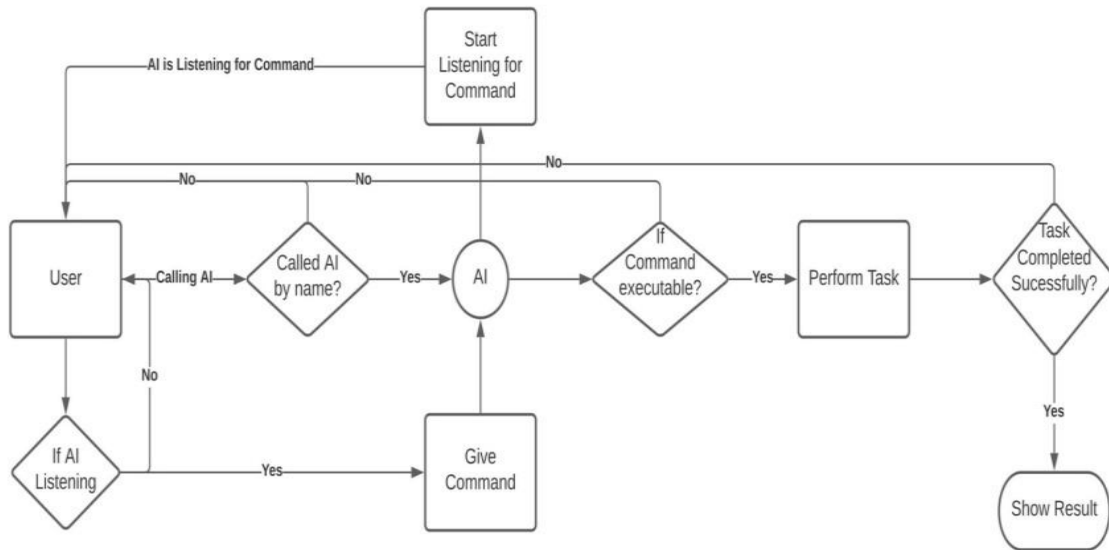
Data Flow Diagram

Above is the Data flow of the voice assistant. It is important to call AI by its name or else it will ignore all the speech. After getting called by its name AI starts listening for actual command. After the command is given to the assistant. Speech recognition module is used to convert the input voice to text. This text is then as command, goes through the program and keywords are checked with the conditions, if keywords matched then the particular block of code is executed, if not the process goes back to user giving error message and asking for new command. The user can add path for specific movie, song and other required folder for fast access. The AI will be in loop so if command got executed or not run then the pointer will go back on calling the AI.

User can perform: -

• User can give internet and PC commands using voice

• PC commands like User can find any file wherever in his/her computer.

• Play movies and songs available in computer

• Open any application, take screenshot, shutdown, restart etc.

• Internet commands like Search on google.

• Play YouTube videos, get Wikipedia information directly on Screen

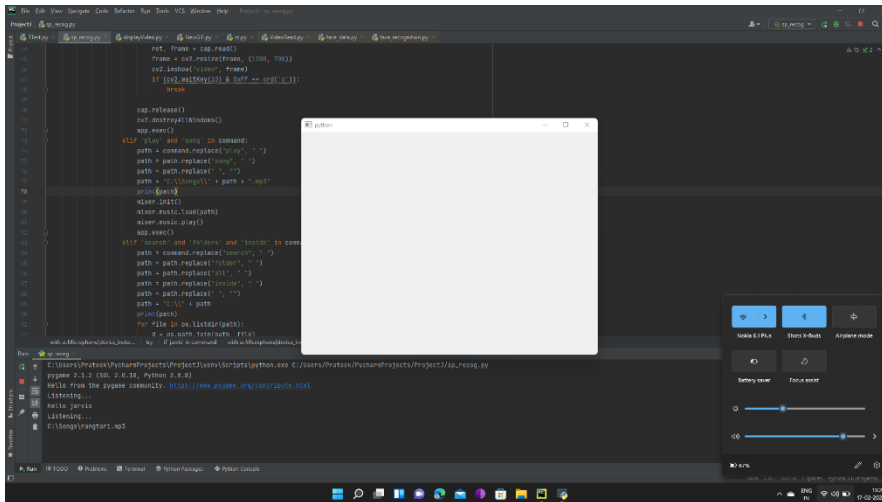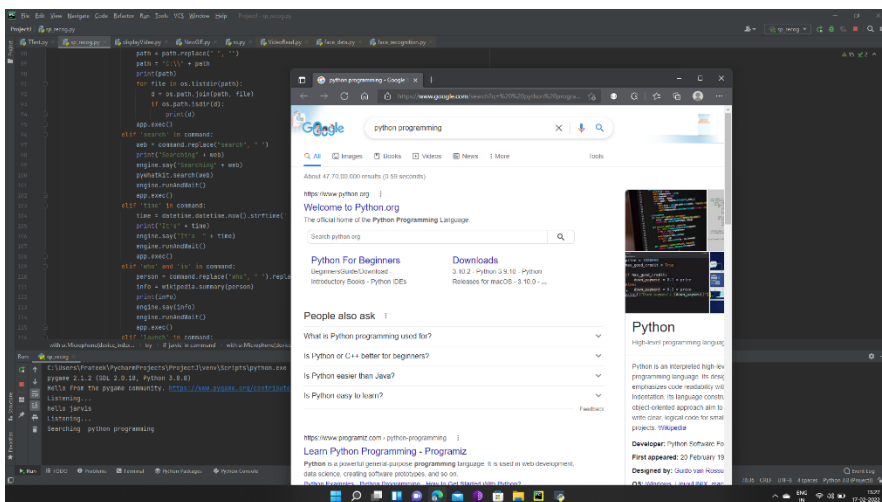All these things can be done using voice.

4. SCREENSHOTS
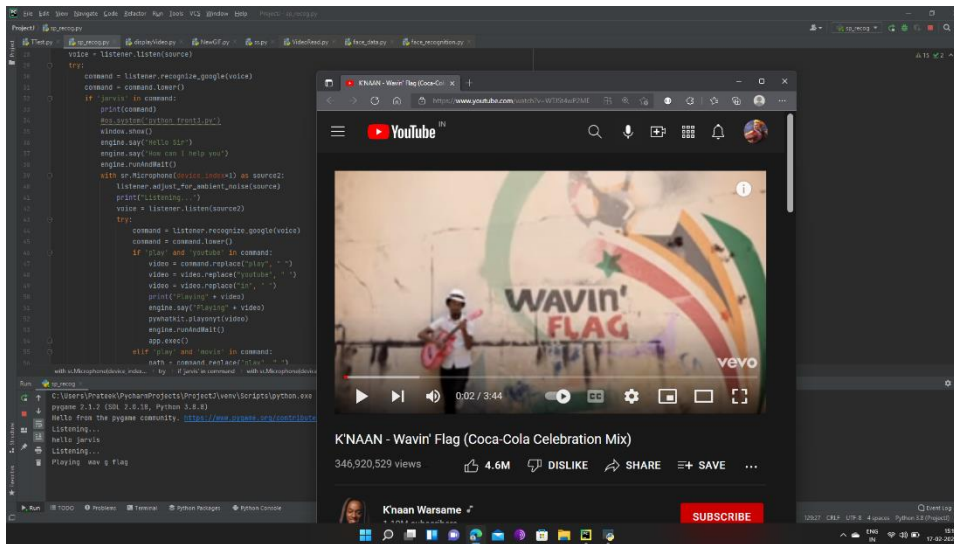
Playing YouTube video
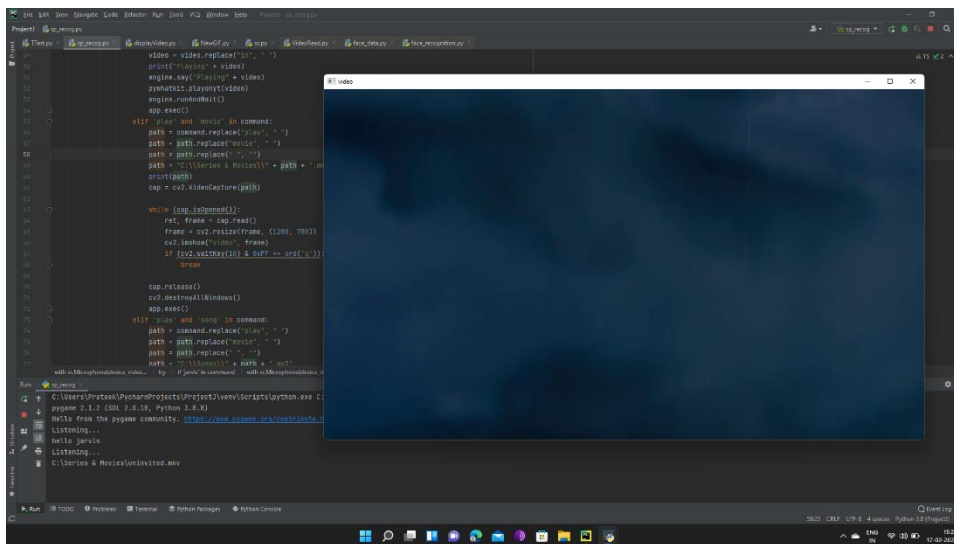
Playing movie on device

Playing song on device

Searching on google

5. COMPONENTS USED AND REQUIRED

• Python for AI program

• Pyqt5 for software application

• Internet

• Microphone

• Speakers

6 FUTURE SCOPE

As the day progress we get new ideas to add and implement. The more features we add more better the assistant will get. This Assistant will keep updating with new features in future.

7. CONCLUSIONS

In this paper, we have discussed about working and features of the Virtual Assistance. This project is built using open-source software modules with PyCharm community. This project is updateable, means we can add more features in near future. It works on user's commands and also give voice responses to the user. It greets the user the way they feel more comfortable and freer to interact with the voice assistant. The application also eliminates any kind of unnecessary manual typing required to perform task. All commands are the voice input rather than the text.

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