AI JARVIS VOICE ASSISTANT

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Acknowledgement

It gives us a great sense of pleasure to present the synopsis of the mini project (AI Jarvis Voice Assistant) undertaken during B.Tech. IIIrd Year, this project itself is going to be acknowledgement of the inspiration. Drive and technical assistance will be contributed to it by many individuals.

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AI Jarvis Voice Assistant

A voice assistant or intelligent personal assistant is a software agent that can perform tasks or services for an individual based on verbal commands i.e. by interpreting human speech and respond via synthesized voices. Users can ask their assistants' questions, control home automation devices, and media playback via voice, and manage other basic tasks such as email, to-do lists, open or close any application etc with verbal commands.

Let me give you the example of Braina (Brain Artificial) which is an intelligent personal assistant, human language interface, automation and voice recognition software for Windows PC. Braina is a multi-functional AI software that allows you to interact with your computer using voice commands in most of the languages of the world. Braina also allows you to accurately convert speech to text in over 100 different languages of the world.

About the Project

As we know Python is a suitable language for script writers and developers. Let's write a script for Personal Voice Assistant using Python. The query for the assistant can be manipulated as per the user's need.

The implemented assistant can open up the application (if it's installed in the system), search Google, Wikipedia and YouTube about the query, and calculate any mathematical question, etc by just giving the voice command. We can process the data as per the need or can add the functionality, depends upon how we code things.

We are using Google speech recognition API and Google text to speech for voice input and output respectively. Also, for calculating mathematical expression Wolfram Alpha API can be used.

Play sound Package is used to play the saved mp3 sound from the system.

Motivation

Who doesn't want to have the luxury to own an assistant who always listens for your call, anticipates your every need, and takes action when necessary? That luxury is now available thanks to artificial intelligence-based voice assistants.

Voice assistants come in somewhat small packages and can perform a variety of actions after hearing your command. They can turn on lights, answer questions, play music, place online orders and do all kinds of AI-based stuff. Voice assistants are not to be confused with virtual assistants, which are people who work remotely and can, therefore, handle all kinds of tasks. Rather, voice assistants are technology based. As voice assistants become more robust, their utility in both the personal and business realms will grow as well.

Future Prospects

Throughout the history of computing, user interfaces have become progressively natural to use. The screen and keyboard were one step in this direction. The mouse and graphical user interface were another. Touch screens are the most recent development.

The next step will most likely consist of a mix of augmented reality, gestures and voice commands. After all, it is often easier to ask a question or have a conversation than it is to type something or enter multiple details in an online form.

The more a person interacts with voice-activated devices, the more trends, and patterns the system identifies based on the information it receives. Then, this data can be utilized to determine user preferences and tastes, which is a long-term selling point for making a home smarter. Google and Amazon are looking to integrate voice-enabled artificial intelligence capable of analyzing and responding to human emotion.

Requirements

A) Hardware Requirements(Minimum):

Processor: Intel Pentium III

Main Memory (RAM): 4 GB

Cache Memory: 512 KB

Keyboard: 108 Keys

B) Software Requirements(Minimum):

Technology: Python 3, Different Libraries

Platform: Jupyter Notebook

Operating System: Windows 7, 8, 9, 10, XP