

An Approach for Developing Android Based Virtual Assistant for Windows Users

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Abstract: An intelligent virtual assistant or a personal assistant is a software that is designed to perform tasks or services for an individual based on commands or questions. Several Virtual Assistants were built to help individuals to get things done through voice which otherwise would have taken a lot of manual steps and valuable time. Virtual assistants makes life easier by means of voice control. Currently available assistants like Google Assistant, Apple Siri and Microsoft Cortana can get things done only on the platform they are installed on. So, Google assistant on android can't perform tasks on desktop that is powered by Windows operating system. This paper concerns the development of VA for android that can perform tasks on Windows PC.

Keywords: AES, Android, Natural Language Processing, Random Forest classifier, Virtual assistant, Windows.

1. Introduction

Personal Computers (PCs) are what most people use on a daily basis for work or personal use. User may send E-mails, open apps to perform some activities, listen to music while working with some tasks. While user does most of the things manually, they might need something that can do most of the tasks for them. This is where personal assistants or virtual assistants comes in. For instance, the user may need to navigate to the settings and find bluetooth option to turn it on or off. Instead, they can simply ask assistant to do that job. It can save users time in most of the cases especially when the task involves a lot of steps. That is why most of the Windows users use Cortana to get most of the things done in ease. However, there may be times when users need to exchange data between smart phone and PC. Also, users might wish to have control over their PC even when the PC is far especially when given to a friend or family member. In such cases, users wish to track activities and take certain decisions based on the observed activity (For example, if user observes that his/her friend is trying to alter an important document, user can suspend the same and can take further decisions to remotely encrypt important documents or to lock the PC). Along with these features, it should be able to handle most of the basic stuffs like setting an alarm, tweaking some system settings, opening apps, streaming music / videos online and much more. Just like how users can chat with Google assistant, Cortana or any other assistant, the users should be able to chat with this assistant as well.

2. Literature survey

A computer remote control system for the blind and physically disabled people was developed. Blind people experience difficulty in using computers with keyboard and/or mouse. The system provides a way that the blind and physically disabled people can control many functions of a computer system in ease by means of voice control. Users can command smart phone device to perform some tasks through speech; such as sending emails, getting weather info etc. The requested task is then performed immediately. [1]

Electronic devices and PC's are the most important part of one's life. The project describes how a PC can be controlled from remote place through smart phone with the help of the Internet. It is also possible to remotely monitor the connected devices. The project is aimed to develop an application that can connect to a computer running client application. The system uses the MAC address of the target PC to keep an eye on it. The system provides a way to copy files from PC to the android device, open and kill applications, Turn off the PC and more. [2]

One of the brilliant innovation by Apple is "SIRI" which is aimed to provide voice based services to its end users. After this, Google developed even more powerful assistant called "Google Assistant". This Google's innovation has reached beyond the expectation because Google announced that their assistant can call and book an appointment on behalf of the user. These assistants may not work properly without an active Internet Connection. The developed assistant is aimed to work with or without Internet Connectivity. It is given the name Personal Assistant with Voice Recognition Intelligence. It takes voice or text as the input and gives the output in the form of action to be performed or the search result which will be dictated by the personal assistant to the end user. The system is designed in such a way that all the services of the mobile are made available to the end users. [3]

3. Methodology

A. Train and create the machine learning model

Assistant should be able to make good decisions based on the user commands. To do this, assistant must undergo deep

training to make sure that it can provide better results by making fairly accurate decisions.

B. Make devices interact each other

Establish connection between PC and android device so that they can interact with each other by sending commands or useful information back and forth.

C. Provide implementation for the tasks

The trained assistant can tell what to do based on the command, but its nothing without implementing those what to dos.

4. Conclusion

This work describes an idea of developing virtual assistant that can do things in the platform(Windows) other than the platform(Android) where the assistant is installed. By developing such assistant, users can keep track of the activities

when they are not directly in touch with their PC and make certain decisions based on the observed activity. Apart from this, users can also use this assistant to make their life easier by asking the assistant to do most of the tasks. The assistant is expected to train on question answering which enables the users to chat with the assistant.

References

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