VIRTUAL INTELLEGANCE FOR WINDOWS OPERATING SYSTEM USING AI

T SUNDARARAJULU[1], BHUMIREDDY VENKATA SAI BHARADWAJA[2], L LAVANYA[3],

D NAVEEN REDDY[4], K MOUNIKA[5]

[1]Assistant professor, [2,3,4,5] Students, Dept of CSIT

[1,2,3,4,5] Siddharth Institute of Engineering & Technology, Puttur-517583

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Abstract

A voice assistant is a virtual assistant that uses voice recognition and voice synthesis to pay attention to specific voice instructions and go back relevant statistics or perform precise capabilities as asked through the user. This software program presents a easy interface for doing unique operations in home windows OS. it can be used by academic institutes or university to carry out different operation in windows OS by using the usage of voice instructions. A person can use this software by way of voice command. It recognizes the command given with the aid of and carry out different operations based on the given commands. This software will reply with speech. disadvantage of existing device, internet site is, it can't perform inner operations in an OS. In proposed device, it performs internal and external works of an OS. Its supports for home windows running system.

Keywords: windows, Python, turtle, Speech-recognition, PyAudio

Introduction

In today's generation all tasks are digitalized. we've got phone in fingers, and it's far nothing less than having world at your fingertips. these days we aren't even using hands. We just talk of the mission, and it's far executed. There exist systems wherein we are able to say text Dad, "I'll be late nowadays." And the textual content is sent. that is the mission of a virtual Assistant. It also helps specialized project such as booking a flight or locating cheapest eBook on line from numerous ecommerce websites and then presenting an interface to e book an order are supporting automate search, discovery, and online order operations. they could take commands via text (online chat bots) or with the aid of voice. Voice based totally intelligent assistants need an invoking word or wake word to prompt the listener, observed by the command. For my undertaking, the wake word is "WAKEUP." we have such a lot of digital assistants, consisting of Apple's Siri, Amazon's Alexa, and Microsoft's Cortana. For this project, wake word changed into chosen "WAKEUP." This gadget is designed for use successfully on desktops. private assistant software improves person productiveness with the aid of dealing with routine duties of the user and by presenting records from online sources to the person.

Related Work

1. LITERATURE REVIEW

[1] Authors: Vadaboyina Appalaraju, V Rajesh, K Saikumar, P. Sabitha, K Ravi Kiran. Design and Development of Intelligent Voice Personal Assistant using Python. Published in: 2021 3rd International Conference on Advances in Computing, Communication Control and Networking (ICAC3N) Date of Conference: 17-18 December 2021 Date Added to IEEE Xplore: 09 March 2022 INSPEC Accession Number: 21666422.

[2] Authors: N Kavi Prakash, Tenzin Monlam, Rohan Singh, RP Aravindhan, Pentapuri Vishnuvardhan Reddy, Richa Jain. Voice based EMail with Attachment for Blind Published in: 2022 6th International Conference on Trends in Electronics and Informatics (ICOEI) Date of Conference: 28-30 April 2022 Date Added to IEEE Xplore: 24 May 2022 INSPEC Accession Number: 21776870

[3] Authors: Syed Mohidul Islam, Most Fowziya Akther Houya, Syed Mynul Islam, Salekul Islam, Nahid Hossain. A Comprehensive Bangla Virtual Assistant. Published in 2019 1st International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT) Date of Conference: 03-05 May 2019 Date Added to IEEE Xplore: 19 December 2019.

[4] Author: Shambhavi Sharma. Emotion Recognition from Speech using Artificial Neural Networks and Recurrent Neural Networks Published in 2021 11th International Conference on Cloud Computing, Data Science & Engineering (Confluence) Date of Conference: 28-29 January 2021 Date Added to IEEE Xplore: 15 March 2021. INSPEC Accession Number: 20565439

[5] Authors: Pooja Singh, Pinki Nayak, Arpita Datta, Depanshu Sani, Garima Raghav, Rahul Tejpal. Voice Control Device using Raspberry Pi Published in 2019 Amity International Conference on Artificial Intelligence (AICAI) Date of Conference: 04-06 February 2019 Date Added to IEEE Xplore: 29 April 2019 INSPEC Accession Number: 18620804

2. EXISTING SYSTEM

Existing system applications can perform tasks such as browsing or providing information based on related searches. It is unable to perform internal operations such as closing windows, saving files, and so on. It cannot run in the background; we must open this software each time we need to use it. These are the system requirements used in the existing system.

2.1 DISADVANTAGES

• Internal operations can't be performed in windows OS.

• This software won't run in background continuously.

• Users need to use fluent English to make a command work properly.

• This software is Time Consuming when compared to proposed system.
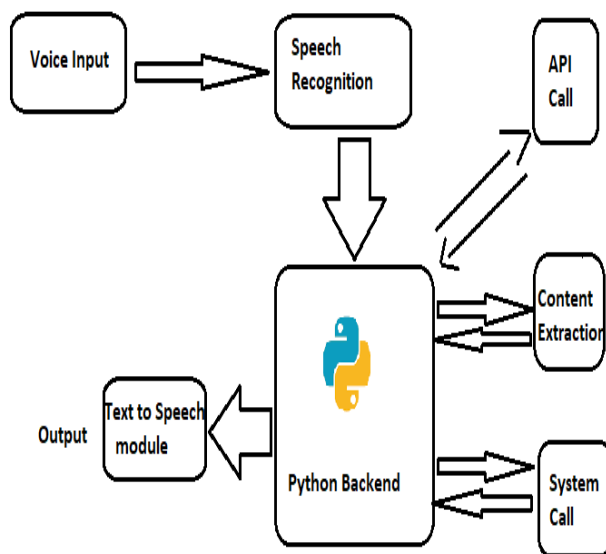
3. PROPOSED SYSTEM

In proposed system, it has a user-friendly UI, every query and response is displayed on it. A user can give commands to this software by a command, and the system respond according to the query, and it also provide its output in the form of speech. It works based on voice commands so we can use it, while doing other works. It also runs in background, when we turn on it, it works continuously until we disable it, and it won't affect the other works. To make software more user

friendly, Turtle package has been used, to work effectively different packages of python has been used for making this software more efficient.

3.1 ADVANTAGES

• This software has high performance when compared to existing system.

• This voice assistant is very responsive to the user.

• This software is user friendly, and this software won't store any data in catch memory as like google and other voice assistants.

4. SYSTEM ARCHITECTURE

4.1 VOICE INPUT

Voice based commands are the main part of voice assistant, in this software mic plays a key role, a user can give input to the software with the help of mic. A user input is in the form of analogising it is converted into machine understandable format to process the task.

4.2 SPEECH RECOGNITION

Speech recognition is a python module used to recognize the user command. This package Contains microphone module which enables the microphone in the system to take commands from User. This package minimizes the background noise while taking the command to understand the command more accurately.

4.3 API CALLS

An API, or software Programming Interface, is a server that you could use to retrieve and ship facts to the usage of code. APIs are maximum typically used to retrieve information, and so that you can be the focus of this amateur academic. when we need to receive facts from an API, we want to make a request. Requests are used all over the net.

4.4 CONTENT EXTRACTION

facts extraction is the method of collecting or retrieving disparate styles of information from a selection of assets, a lot of which can be poorly prepared or absolutely unstructured. information extraction makes it viable to consolidate, system, and refine records so that it may be stored in a centralized vicinity with the intention to be transformed. these locations can be on-web site, cloud-primarily based, or a hybrid of the

4.5 SYSTEM CALL

A machine name is a mechanism that offers the interface between a method and the operating system. it is a programmatic method in which a pc software requests a service from the kernel of the OS. A gadget name (typically abbreviated to syscall) is the programmatic manner in which a computer software requests a service from the operating machine on which it's far performed.

5. MODULES DESCRIPTION

5.1 SPEECH RECOGNITION:

Speech recognition is a machine's capacity to listen to spoken phrases and perceive them. you may then use speech reputation in Python to convert the spoken words into text, make a query or supply a reply. you could even software a few devices to reply to those spoken phrases. you can do speech reputation in python with the help of computer programs that absorb enter from the microphone, system it, and convert it proper into a appropriate form. Speech reputation appears pretty futuristic, however it's miles gift all around you. automatic cellular telephone calls permit you to speak out your query or the query you want to be assisted on; your virtual assistants like Siri or Alexa moreover use speech recognition to speak to you seamlessly.

5.2 TURTLE

Turtle is a pre-installed Python library that enables users to create pictures and shapes by providing them with a virtual canvas. The onscreen pen that you use for drawing is called the turtle and this is what gives the library its name. In short, the Python turtle library helps new programmers get a feel for what programming with Python is like in a fun and interactive way. Turtle is mainly used to introduce children to the world of computers. It's a straightforward yet versatile way to understand the concepts of Python.

5.3 WIN32COM.CLIENT

There are several APIs available to convert text to speech in python. One of such APIs available in the python library commonly known as win32com library. It provides a bunch of methods to get excited about and one of them is the Dispatch method of the library. Dispatch method when passed with the argument of SAPI.SpVoice It interacts with the Microsoft Speech SDK to speak what you type in from the keyboard.

5.4 Jokes

If the user gives the command joke by the help of PyAudio module it will create a single joke from a certain category in a particular type and gives the output in speech as well as text for the user.

5.5 Screenshot

If the user gives a command screenshot by the help of pyautogui module it will take a screenshot and save in desktop.

5.6 Open Taskbar

Search When the user gives a command open taskbar search it will open the search bar and ask what i need to search if you tell any application name it will automatically open it with the help of module know as OS. Switch 5.7 **Window**

When the user gives a command switch window it will switch from the present window to the next and user to weather to open it or not if he says no, it will ask the window number to open it.

5.8 Shut down

When a user what's to shutdown his/her pc with the help of the command shut down it will shut down the system, for security purposes it will reconfirm user to shut down the system or not.

5.9 Restart

When a user what's to Restart his/her pc with the help of the command Restart it will Restart the system, for security purposes it will reconfirm user to Restart the system or not.

6. Conclusion

cause of virtual assistant is to being capable of voice interplay, song playback, making to-do lists, placing alarms, streaming podcasts, playing audiobooks, and providing climate, traffic, sports, and different actual-time records, which includes news. virtual assistants permit customers to speak herbal language voice instructions in order to function the device and its apps. there's an improved usual recognition and a higher level of consolation proven mainly via millennial customers. in this ever-evolving virtual world where pace, performance, and convenience are continuously being optimized, it's clean that we're transferring closer to much less display screen interaction.

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