

A Virtual Voice Enabled Assistant for PC using python

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Abstract

Recognizing the speech is the process for Recognizing speech of mortal by computer and producing affair by well written sequence format. During these days operations which are grounded on speech recognition are entering enormous fashion ability because of using Natural Language Processing (NLP) ways. To help physically impaired people we came up with an idea of erecting a voice adjunct with continues commerce point. For this, we're using speech API module then. In Our System, we've substantially three modules. One is user module, other is speech API module and the final bone is system module. Using this interface, every stoner can interact with system to complete their workshop related to Google hunt and document medication. Then, the main advantage is stoner can interact with the system continuously until he or she wants to exit.

Key Words: Speech Recognition, NLP,, Speech to Text, Text to Speech, Voice Assistant, Speech API.

1. INTRODUCTION

Consciously or unconsciously, personal assistants are now an integral part of our lives. This is because language plays a huge role in people's lives, as well as some potential applications. This is because of all the functionality and ease of use they offer. Speech recognition is one of the main aspects of NLP. This can be done using Python. Personal assistants are also capable of automating mundane tasks, allowing users to focus on the things that matter most to them. Personal assistants provide functions such as making calls, writing messages, taking pictures, saving to-dos on the go, surfing the web, and more. Therefore, utilizing these capabilities of virtual assistants can save individuals a lot of time and effort. It is important to focus more on what is most important to a person, be it personal or professional work. People typically spend more time on routine tasks and can be automated with these types of personal assistant. When someone is working in an environment the environment, he/she is not familiar with, it is often difficult to find the application they need, such as a browser, IDE or other software. Most of the time, they waste.

Time just looking for apps. This results in unnecessary time loss. Therefore, voice-controlled personal assistants help automate this process. Users are expected to simply issue voice commands and the assistant will handle the rest. The paper proposes a voice-activated personal assistant, which would allow a person to use voice commands to get things done, and also s-have a lot of time. This voice-enabled personal assistant can be implemented using technologies such as speech-to-text and text-to-speech, or it can be integrated with other functions as needed.

25% of Searches on the Windows 10 taskbar are voice-driven- and that's from desktop, not even mobile! According to HubSpot, 19% use Siri at last daily ,37% use Siri monthly, 23% use Microsoft Cortana monthly , and 19% use Amazon's Alexa monthly, and 19% use Amazon's Alexa monthly[1] 60 % of smartphone users started using Voice search in the past 12- 18 months – Search Engine Land 2015-2020, about 30% of Searches will be Screenless- thanks to Google Technologies such as Assistant for Home , Amazon Alexa for Echo, and Chatbots(Source: ComScore) According to the Global WebIndex, nearly 10% of the online population, or 325.8 million people , used voice in the past month. to ship 10,00,00 Google. Home devices in 2022 Nearly 50% now use voice Search when researching products – social media Today

LITERATURE SURVEY

Today, personal assistants or virtual assistants have become an integral part of our lives. Every organization or individual is turning to these types of technologies because they can help them do their jobs more easily. The system is based on a desktop application. The system includes a virtual assistant capable of taking user input, understanding it, analyzing it, and performing tasks accordingly. This can help users save a lot of time

A digital voice based totally personal sensible assistant for visually disabled persons. This challenge will recognize and respond to what consumer will say in an effective and efficient manner thru voice, just like having a communicate in this paper the main cognizance changed into on the improvement of conversational agent and speech recognition module in an effort to

paintings offline and apprehend the Indian accessory answer their technique is to make IPA includes using Java library Sphinx-4, MaryTTS and neural networks to embed the gaining knowledge of ability Moreover, in 2017 Othman

proposed paper on Voice Controlled Personal Assistant Using Raspberry Pi at International Journal of Scientific & Engineering Research Volume 8, The task display the implementation of a Voice Command System as an Intelligent Personal Assistant (IPA) that may perform several obligations or services for an character the use of Raspberry Pi as a first-rate hardware to enforce this version which goes on the number one enter of a consumer's voice. Bibek Behera has proposed a model for a non-public assistant to ease out the paintings completed by means of humans for duties like booking tickets, ordering food, etc. Chappie makes use of herbal language processing (NLP) to examine chats and extracts rationale of the user. Then it makes use of these statistics and AIML (Artificial Intelligence Mark-up Language) to make a conversation with the user. According to Moustafa Elshafei Virtual Personal Assistant (VPA) is the next technology of provider services for cellular and clever device users. VPA efficiently responds to conversational voice commands and affords a unmarried factor of contact that perfectly engages a extensive variety of information.[7] It additionally controls the phone calls, manages the private activities through calendar, permits the consumer to access his venture supervisor thru voice interface, and consists of all of the functions of Unified Messaging. The digital personal assistant permits the person to optimize the time and fee, decorate his/her usual productiveness, and limit the interruptions to regular workflow.

This Undertaking work of convenient voice acknowledgment began with a concise presentation of the innovation and its applications in various areas The undertaking of the Report depended on programming improvement for versatile voice acknowledgment. After the advancement of the product at long last it was tried and results were examined, not many inadequacies factors were gotten front.

2. PROPOSED SYSTEM

At first, the associate will begin tolerating the client input. In the wake of getting the information, the associate will change over the similarity voice contribution to the advanced text. On the off chance that the aide couldn't change over the voice into text, it will begin asking the client for the information once more. Whenever changed over, it will begin examining the info and will plan the contribution with specific capacity. What's more, later, the result will be given to the client by means of the voice order.

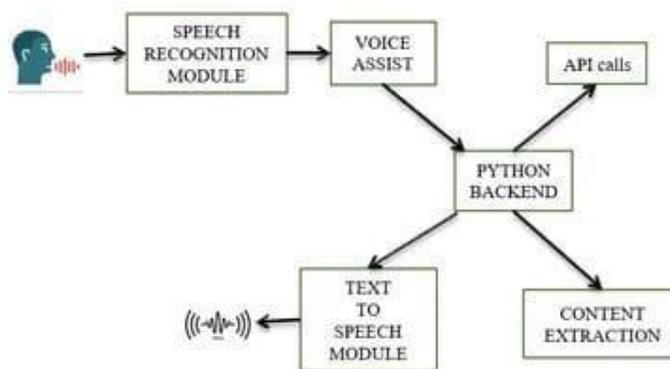
Discourse acknowledgment is a library for performing discourse acknowledgment, with help for a considerable length of time and APIs, on the web and disconnected. Discourse acknowledgment, as the name recommends, alludes to programmed acknowledgment of human discourse. Discourse acknowledgment is one of the main errands in the area of human PC association. Assuming you have at any point cooperated with Alexa or have at any point requested Siri to finish a responsibility, you have previously encountered the force of discourse acknowledgment organizations like IBM, and so on, for this undertaking, we pick Google's Discourse Acknowledgment Motor, that will change over the similarity voice order into an advanced text design. We pass that text as a contribution to the Partner, and it will look for the watchword. Assuming the information order has a word that coordinates with the separate word, the particular capacity will be called, and it will play out the activity likewise, such as giving the current time, or date, or telling battery status, taking a screen capture, saving a short note, and some more. For this Individual Menial helper, the fundamental benefit is that it saves a great deal of time, and it could actually deal with inquiries from individuals, of various voices. There is no standard that one needs to provide any accurate determined order to set off a specific activity. Client has the adaptability to provide order for client, in normal language. The programming language used to plan this Voice empowered Individual Right hand for PC is PYTHON 3.8.3. What's more, the IDE (Incorporated Improvement Climate) that we utilized is Microsoft Visual Code

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Date and time module supplies classes for controlling dates and times. While date and time is upheld, the focal point of the execution is on proficient quality extraction for yield designing and control. Wikipedia is a Python library that makes it simple to get to and parse information from Wikipedia. Search Wikipedia, get article synopsis, get information like connections and pictures from a page, and that's just the beginning. Wikipedia wraps the Media Wiki Programming interface so you can zero in on utilizing Wikipedia information, not getting it. The program module gives a significant level of interaction to permit showing electronic reports to clients. Under most conditions, just calling the open work from this module will make the best choice. Selenium bundle is utilized to mechanize internet browser association from Python.

Voice acknowledgment works in view of the reason that an individual voice displays attributes that are novel to various speakers. The sign during preparing and testing meetings can be incredibly unique because many factors, for example, individuals voice change with time, ailment (e.g., The speaker has a chilly), talking rate and furthermore acoustical commotion and variety recording environment via microphone.



3. RESULT AND ANALYSIS

In the beginning, we enabled Our programming System language with the help of Sapi5 and pyttsx3. pyttsx3 is text-to-speech library in python. Unlike other libraries, it works offline and is compatible with Python 2 and Python 3. The Speech Application Programming Interface or SAPI is an API developed by Microsoft for using Speech recognition and Speech Synthesis in Windows applications. Then we define the Speak function so that the program can speak the output. After that, we define a function to receive voice Command through the System microphone. Then define the main function, where all the functionality of the program is defined

In our system, the input process is carried out as prescribed. On the one hand, it is a double-edged sword as a user finishes, but the recognizer is waiting for a response time before switching and transitioning subsequent inputs text. Then the speech recognition module will now complete. Detects the process and spawns a search thread.

A. NETWORK QUERY

Network query: -Asking questions is an essential part of one's life. Even developers working on Windows change. We have addressing an important part of internet users' lives by enabling Our voice assistant searches the web. It supports rich from search engines and displays like Google, Bing, and Yahoo by scraping the results of a search query.

B. ACCESS TO YOUTUBE

Video remains the main source of entertainment, One of the top priorities for virtual assistants. She just as important for entertainment educational reasons. Because the majority of teaching and research in modern YouTube. This helps make the process more hand-on. The four walls of the classroom.

C. WEATHER REPORTS

Obtaining real-time weather conditions for a location remains an important task for Virtual assistants. It helps users set their course of action. It solves this problem with the help of python.

D. RETRIEVING IMAGES

Users can retrieve images directly from the UI. Image assourced from all web codes received from Google Images. These are formatted according to usage and displayed compactly in the user interface

E. DICTIONARY

The meaning of the dictionary One of the internet is to find out the meaning of words and their use in our daily lives. Instead of searching for clunky books, our user can simply use the voice assistant to search for them and understand their meaning in an instant

F. MEDICAL DETAILS

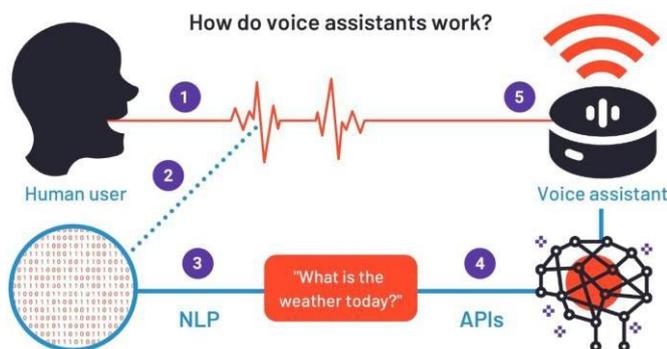
One of the important problems that our software solves Users can inquires about medications or symptoms. The former tells you full details of the drug, Such as contradictory indication, trade or brand name, dosage, administration, warning and precautions, storage conditions etc., On the other hand, the symptoms feature allows you to query your symptoms while taking it. List various diseases and their medicines that may be affected. This is help for those who are busy with their lives and struggle to see a doctor right away, and therefore on the internet to find the best result for causes

E. SET REMINDER

One of the main functions of a voice assistant is to set reminders for users. This feature is no different. Users can set reminders to be notified about task at specific time. This helps users Especially developers can easily plan their time and resources. All the user has to do is enter the setup reminder in the assistant.

F. SEND MESSAGES

In cooperation mailing highlights to facilitates the occupation of mailing, which in any case would need to be finished by opening the concerned email address. Here, you don't have to go for one more tab to do-one of the significant undertakings of your everyday undertakings. The client can send messages to the idea collector.



CONCLUSION

This paper presents an exhaustive outline of the plan and improvement of a Voice empowered individual partner for pc utilized Python programming language. The present variant of our associate has a few decent highlights and is very well responsive yet there is parcel that is yet to be gotten to the next level. The agreement and dependability of our colleague can

be worked on additional. The future advancement of the partner incorporates combining NLP, AI, IoT with it. What the remote helpers can accomplish is much past what we have accomplished till now. This Voice empowered individual partner, in today's way of life will be more successful in the event of saving time, contrasted with that of earlier days. This Individual Associate has been planned easily of purpose as the fundamental component. The Associate works appropriately to play out certain undertakings given by the client. Besides, there are numerous things that this aide can do, such as switching our PC off, or restarting it, or reciting some latest news, with just one voice command.

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