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Ai virtual assistant python

Voice assistants can make your life easy! Have you ever wondered how great it would be to have your own A.I. assistant? Imagine how easier it would be to send emails without typing a single word, searching Wikipedia without actually opening web browsers, and performing many other daily tasks with a single voice command. In this tutorial, you'll learn how to code and create your own A.I. voice assistant on Python. What can this AI assistant do for you? It can send emails to you. He can play music for you. It can do Wikipedia searches for you. It can open websites like Google, Youtube, etc. in a web browser. It can open the code editor or IDE with a single voice command. Enough talk! Let's start building our own A.I. assistant that can help you with a lot of things. Configuring the environment for code: I used Pycharm to encode this up. Feel free to use any other IDE you are comfortable with and start a new project. P.S. Don't forget to pre-decide the name of your voice assistant :P Definition of a speaking function: The first and most important thing for an A.I. assistant is to speak. To make our bot talk, we'll encode the speak() function. This feature will take audio as an argument and then, it will pronounce it. Now, the next thing we need is audio. So we're going to install a module called pyttsx3. What is pyttsx3? Python library to help us convert text to speech. In short, it's a library from text to speech. It's offline and it's compatible with Python 2 as well as Python 3. Installation: After successfully installing pyttsx3, import this module into your app. Usage: What is sapi5? Microsoft-developed Language API Helps you synthesize and recognize voiceWest voiceId? The voice ID helps us select different voices.voice[0].id = Male voice[1].id = Female voice Message of our speak function(): Create our main function: Now we will create the main () function, and inside this function main() we will call our speaking function. Everything you will write inside this speak() function will be converted to language. Welcome! At the same time, our A.I. has its voice, and it is ready to speak. Coding function wishme() : Now, we are going to make a wishme() function that will make our A.I. desire or greet us according to the time on the computer. To provide the current A.I. time, we need to import a module called datetime. Import this module into your application, by: Now, let's start defining our wishme function(): Here we have saved the whole value of the current hour or time in a variable named hour. Now we will use this hour value inside the if-else cycle. Defining the takeCommand() function: The next most important thing for our A.I. assistant is that he should be able to take command using our system's microphone. Now we will encode the takeCommand() function. Guest reviews for this place to stay, but you're not yet sure? With takeCommand() function, our A.I. assistant will be able to rotate the line output by taking the microphone input Us. Before you define the takeCommand() function, we need to install a module called speechRecognition. Install this module by: After successfully installing this module, import this module into the application by writing the import operator. Let's start encoding our takeCommand(): We have successfully created our takeCommand() feature. Now we're going to add a try and besides a block in our program to effectively handle errors. Task 1: To find something on Wikipedia: To search Wikipedia, we need to install and import the Wikipedia module into our application. Installing Wikipedia module: After successfully installing the Wikipedia module, import the Wikipedia module into the application by writing an import statement. In the above code, we used the if statement to check whether Wikipedia is in a user search query or not. If Wikipedia is found in a user's search query, two sentences (which can be changed by changing the number of sentences from 2 to any number you want) from a summary of the Wikipedia page will be converted to speech using speak. Task 2: To open YouTube in a web browser: To open any website, we need to import a module called webbrowser. This is a built-in module and we do not need to install it with a pip statement, we can directly import it into our application by writing an import statement. Code: Here we use the elif cycle to check whether Youtube is in a user's request or not. Suppose a user gives the Command Please open YouTube. Therefore, the open YouTube will be in the user's request, and the elif condition will be true. Task 3: Open Google's web browser: We open Google in a web browser, applying the same logic we used when opening Youtube. Task 4: To play music: To play music, we need to import a module called os. Import this module directly with the import statement. In the above code, we first opened our music catalog and then listed all the songs present in the catalog using the OS module. With os.starfile you can play any song of your choice. You can also play a random song using a random module. Whenever you command to play music, A.I. will play any random song from the song catalog. Task 5: To know the current time: In the above code, we use the datetime() function and save the current system time to a variable called strTime. After storing time in strTime, we pass this variable as an argument in the talk function. Now the time bar will be converted to language. Task 6: To open Pycharm: To open Pycharm code or any other program, we need the program code path. After copying the target application, save the target to a variable. Here I save the target to a variable called codePath, and then we use the OS module to open the application. Task 7: To send an email: To send a letter, we need to import a module called smtplib. What is smtplib? Easy mail transfer (SMTP) is a protocol that allows us to send emails and direct emails between mail servers. The method of the instance called sendmail is present in the SMTP module. This instance method allows us to send an email. 3 parameters required: Sender: Sender's e-mail address. Receiver: Receiver email. Message: A line message that you want to send to one or one recipient. Now we will create a sendEmail() function to help us send emails to one or one recipient. Note: Don't forget to include less secure apps in your Gmail account. Otherwise, sendEmail will not work as expected. Call sendEmail() function inside the main() function: We use the attempt and, in addition to the block, to handle any possible error that may occur when sending emails. What have we done so far? First of all, we have created a wishme() function that provides user greeting functionality according to system time. After wishme() function, we created a takeCommand() feature that helps our AI take command from the user. This feature is also responsible for returning a user's query in a string format. We have developed code logic to open various websites such as Google, YouTube, etc. code logic has been developed to open Pycharm or any other application. Finally, we added functionality to send emails. Is it A.I.? Many people will argue that the virtual assistant we created is not A.I., but it is the output of a bunch of statements. If we look at the most basic level, the only goal of A.I. is to develop machines that can perform human tasks with the same efficiency or even more efficiently. It's a fact that our virtual assistant isn't a very good A.I. example, but it's All End! Cheers! With this, you have successfully made your first virtual assistant. Explore and try adding other functionality to it. I hope you all enjoyed this xDYay blog! You did it! AI personal assistant is part of the software that understands the or written commands and completes the task assigned to the client. This is an example of a weak AI that can perform and perform a user-developed quest. Want to create your AI personal assistant like Apple's Siri, Microsoft Cortana and Google Assistant? You can check out this blog to build one in a few simple steps! With the agony of python programming, the script most commonly used by developers can be used to create your personal AI assistant to perform a user-developed task. Photo captions: FreepikNow, let's write a script for our personal voice assistant using python. Prerequisite: The implemented voice assistant can perform the following task that it can open YouTube, Gmail, Google Chrome and stack overflow. Predict the current time, with the photo, look for or abstract necessary data, predict the weather in different cities, get top headline news from the Times of India and can also answer computational and geographical questions. Next Queries Queries the assistant can be manipulated as needed by users. Packages required: To build a personal voice assistant, you need to install the following packages on your system using pip command.1) Speech recognition — Speech recognition is an important feature used in automation at home and in artificial intelligence devices. The main function of this library is that it tries to understand what people are saying and converts speech to text.2) pyttsx3 — pyttsx3 is a library of text conversion to python conversion library. This package supports text speech engines on Mac os x, Windows, and Linux.3) wikipedia — Wikipedia is a multi-language online encyclopedia used by many people from the academic community from freshmen to students to professors who want information on a particular topic. This package in python extracts the data needed from Wikipedia.4) ecaputure - This module is used to capture images from your camera.5) datetime - It's a built-in module on python and it runs on date and time.6) OS - This module is a standard library on python and it provides the function of interaction with the operating system.7) time - Time module helps us display time.8) Web browser - This is a built-in package on python. It extracts data from web.9) Subprocess - This is the standard use of the library to handle various system commands, such as log off or restart the COMPUTER.10) Json- The json module is used to store and share data.11) request The request query module is used to send all types of HTTP requests. It accepts the URL as parameters and provides access to the given S.12 URL) wolfram alpha - Wolfram Alpha is an API that can calculate expert-level responses using Wolfram algorithms, knowledge base and artificial intelligence technology. This is made possible by Wolfram Language. Implementation: Importing the following libraries Set up the speech engine: The pyttsx3 module is stored in the variable name engine. Sapi5 is a Microsoft Text to speech engine used for voice recognition. Voice ID can be set as 0 or 1.0 indicates male voice.1 indicates Female voice. Determine speech function that converts text to speech. Speak accepts text as an argument to further initialize engine.runAndWait: This function blocks when processing all current commands in a queue. It calls back calls for engine notifications properly and goes back when all commands queued before this call are emptied out of the queue. Initiate User Welcome feature: Define wishMe function for AI Assistant to congratulate the user. The now().hour function is an hour from the current time. If an hour is more than zero and less than 12, the voice assistant wishes you a Good morning message. If an hour exceeds 12 and less than 18, the voice assistant wishes you the following good day message. Otherwise, he voices the message Good team functions for your AI : D detect takecommand function for AI assistant to understand accept human language. The microphone captures human speech, and the discerner recognizes the speech to give an answer. Exception handling is used to handle an exception during a runtime error and recognize _google Google Audio to recognize the language. Main function: The main function starts from here, commands given by people are stored in a variable statement. If the operator provided by users has the following trigger words, it calls the virtual assistant to speak the following following commands. Skill 1 - Getting data from Wikipedia: The following commands help extract information from Wikipedia. Wikipedia.summary() accepts two arguments, the statement given by the user, and how many sentences from Wikipedia need to be extracted are stored in variable results. Skills 2 - Access web browsers - Google Chrome , G-Mail and YouTube: The web browser extracts data from the Internet. The open_new_tab function accepts the URL as the parameter you want to access. The Python time sleep feature is used to add a delay to the program. We can use this feature to stop the program from running for a given time in seconds. Skills 3 - Time prediction: Current time is abstracted from the datetime.now() function, which displays an hour, minute and second and is stored in the variable name strTime. Skill 4 - To get the latest news: If a user wants to know the latest news, the voice assistant is programmed to receive top headline news from Time India using the web browser feature. Skills 5 - Capture Photo: Ec.capture() function is used to capture images from the camera. It accepts option 3. Camera index — The first connected webcam will be marked as index 0, and the next webcam will be marked as index 1. Window name — This can be variable or string. If you do not want to see the window, type as False. Save name - The name can be given to the image, and if you do not want to save the image, enter false. Skill 6 - Search data from the Internet: From a web browser you can search for the necessary data by passing the user statement (command) to the function open_new_tab(). User: Hey G-One, please search for butterfly images. Agnophon opens a Google window & gets an image of a butterfly from the internet. 7- Configure your AI assistant to answer geographic and computational questions: Here we can use a third-party API called wolfram alpha APIs to answer computational and geographical questions. This is made possible by Wolfram. The client is an instance (class) created for wolfram alpha. The res variable retains the response provided by wolfram alpha. To access the wolfram alpha API requires a unique application ID, which can be generated in the following ways: Log in to the official wolfram alpha page and create an account if you don't have one. Author's image2: Sign in using your wolfram ID. Image from author3. You'll now be browsing the home page of your website. Go to account in the upper-right corner where you see your email. Select My apps (APIs) from the drop-down menu. Author's image4. You will see this next window, now click the Get APP_ID the image button from author5. Now you will get the following dialog box, give the appropriate name and description and click the Application ID button, the application ID will be created, and this is a unique identifier. Using the application ID can access the Wolfram alpha API. Image by Human: Hey G-One, what is the capital of California? G-One Voice Assistant: Sacramento, United States. Skill 8 - Additional features: It would be interesting to program your AI assistant to answer questions such as what he can and who created it, right? Skills 9- Weather Forecast: Now, to program your AI assistant to detect the weather, we need to create an API key from the Open Weather map. An open weather map is an online service that provides weather data. By generating an API id on the official website, you can use APP_ID voice assistant to detect the weather of all places when required. Required modules required for import for this json weather detection and query module. This city_name accepts a command given by a person by using the takeCommand() function. The query module retrieve method returns the response object. And json response object methods convert json format data to python format. Variable X contains a list of nested dictionaries that checks whether the COD value is 404 or not if the city is found or not. Values such as temperature and humidity are stored in the main variable keys Y. Human: Hey G-One, I want to get weather data. G-One: What is the name of the city? Man: Himachal Pradesh. G-One: Temperature in Kelvin unit 301.09 , Humidity as a percentage of 52 and Description of light rain. 10- To log off your PC: subprocess.call() is used here to handle the system function to log off or shut down your PC. This causes the AI assistant to automatically turn off your PC. Hurray , We finally built our own voice assistant with AI . Alternatively, you can still add more functionality to your AI voice assistant to perform more tasks. Image author Check my GitHub profile for code: Encoding!! !!