To Do List: Speech Recognition

1. Install **SpeechRecognition**  <https://pypi.org/project/SpeechRecognition/>

In the terminal type: **pip3 install SpeechRecognition**

after the installation is completed, we must install pyaudio to use the microphone

In the terminal type: **pip install pyaudio**

Note: (pip3, the number 3 is used because I’m using python 3 which is the latest version)

Now we can proceed to type code.

1. Importing the module

In the command line or terminal, we type the following code:

**import speech recognition as SR** (This command will import the SpeechRecognition package that we just installed above. SR can be substitute to any variable of your choice)

**r = SR.Recognizer( )** (this assigned variable will recognize our voice command)

**with SR.Microphone( ) as source**: (this will make the Microphone the source or input of the commands)

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**with SR.Microphone( ) as source**:

**print(‘What Can I Help you with?’)** (this can be anything of your choice)

**audio = r.listen(source)** (the input will listen to the “source” which was assigned as the microphone in the previous step), (make sure the variable r = is the same as r.listen)

**text = r.recognize\_google(audio)** (Our audio source will be converted to text. However, we need to choose an AI server to recognize our input), (In this method, I chose Google as the recognizer)

**print( ‘{ }’.format(text) )** (this will print what you just said in the microphone)

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**with SR.Microphone( ) as source**:

**print(‘What Can I Help you with?’)**

**audio = r.listen(source)**

**try:**

**text = r.recognize\_google(audio)**

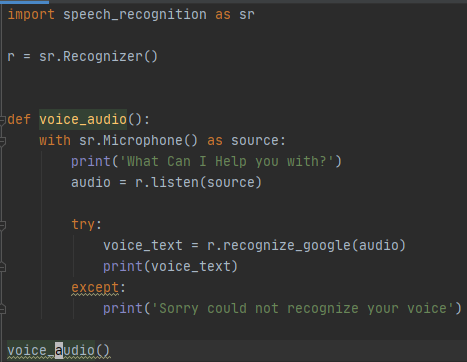
**print( ‘{ }’.format(text) )**)

**except:**

**print (‘Sorry could not recognize your voice’)**

Note: The “try” command will only execute once if there are not errors or exceptions. The “except” will be execute if there is an exception in the “try” command. “except” is similar to “else”. This is useful because sometimes our voice commands cannot be recognized.

Speech Recognition full code



To do List : Google Text to Speech

Install **Google Text-to-Speech** <https://pypi.org/project/gTTS/>

**import os** (it is required to use tools from the operating system)

**import random** (it is required to import random numbers)

**import playsound** ( It’s required to play format audio )

**from gtts import gTTs** (This will allow us to use the Google API)

**text\_to\_speech = gTTS (text = text, lang = ‘en’)** (this parameter coverts string to spoken text)

**r = random.randint(1, 10000)** (this will create a random digit from 1-1000. Reason why we need a random number is to be attached to the audio\_file that we are about to create.

**audio\_file = ‘audio-‘ + str(r) + ‘.mp3’** (this will be used to create the audio file with a random digit)

**text\_to\_speech.save = (audio\_file)** (the audio\_file created above is saved as an audio format)

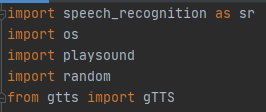
**print(audio\_string)** (the audio file will be printed in text)

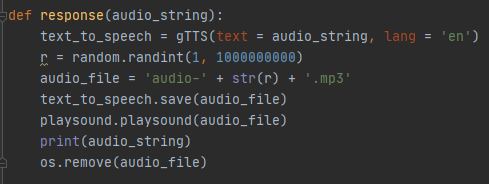
**playsound.playsound.(audio\_file) (**This will play the saved audio file)

**os.remove(audio\_file)** (The audio file will be removed after each play)

Note: Reason why need a random number is because each line of text will be saved as an audio file, if the audio file has the same name, it will give us an error.

Google Text to Speech Full code





To Do List: Weather API

In the terminal type: **pip install pyowm** (this will allow us to enter API keys)

weather\_key = pyowm.OWM(‘API KEY GOES HERE’) (this variable retrieves the API data or information)

**observation = weather\_key.weather\_at\_place(‘Boston, US’)** ( the API will observer the current input location status)

weather = observation.get\_weather (describe the type of weather currently in the location)

**temperature = weather.get\_temperature(‘fahrenheit’) [‘temp’]** (the min and max temperature will be displayed. In this case I typed [‘temp’] so it could only display the current temperature. The default temperature will be displayed in Kelvin. For this I typed ‘fahrenheit’ to display the temperature in Fahrenheit, if you want the temperature in Celsius, change “fathrenheit to ‘celsius’.

Temperature Full Code

