

E:\voice.py

```
1 # Imports the speech recognition library for voice commands
2 import speech_recognition as sr
3
4 # Imports the library for GUI automation
5 import pyautogui
6
7 # Imports the webbrowser library to open web pages
8 import webbrowser
9
10 # Imports the OpenAI library to interact with GPT-3
11 import openai
12
13 # Imports the os library for interacting with the operating system
14 import os
15
16 # Imports Google's Text-to-Speech engine
17 from gtts import gTTS
18
19 # Imports AudioSegment for handling audio files
20 from pydub import AudioSegment
21
22 # Imports function to load environment variables from a .env file
23 from dotenv import load_dotenv
24
25 # Loads environment variables from a .env file
26 load_dotenv()
27
28 # Retrieves the OpenAI API key from environment variables
29 OPENAI_KEY = os.getenv("OPENAI_KEY")
30
31 # Sets the OpenAI API key for use in the program
32 openai.api_key = OPENAI_KEY
33
34 # Gets commands from the user
35 def listen_for_command():
36     recognizer = sr.Recognizer()
37
38     # Opens the microphone for listening
39     with sr.Microphone() as source:
40         print('Listening for commands...')
41
42         # Adjusts the recognizer sensitivity to ambient noise
43         recognizer.adjust_for_ambient_noise(source)
44
45         # Listens for the first phrase and extracts the audio
46         audio = recognizer.listen(source)
47
48     try:
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49     # Recognizes speech using Google's speech recognition
50     command = recognizer.recognize_google(audio)
51     print("Google Speech Recognition thinks you said: ", command)
52
53     # Returns the recognized command in lowercase
54     return command.lower()
55
56 #except' catches specific exceptions that the 'try' block may encounter.
57 except sr.UnknownValueError:
58     print("Google Speech Recognition could not understand audio")
59     return None
60
61 #except' catches specific exceptions that the 'try' block may encounter.
62 except sr.RequestError as e:
63     print(f"Could not request results from Google Speech Recognition service; {e}")
64     return None
65
66 # Converts text to speech
67 def text_to_speech(response_text):
68     print(response_text)
69     tts = gTTS(text=response_text, lang="en")
70
71     # Saves the spoken text to an mp3 file
72     tts.save("response.mp3")
73
74     # Converts the mp3 file to an audio segment
75     sound = AudioSegment.from_mp3("response.mp3")
76
77     # Exports the audio segment as a wav file
78     sound.export("response.wav", format="wav")
79
80     # Plays the wav file using the system's default audio player
81     os.system("afplay response.wav")
82
83 # Get Response From GPT-3
84 def chatGPT_response(prompt):
85     # Sends the prompt to GPT-3 and returns the response
86     response = openai.chat.completions.create(
87         messages=[
88             {
89                 "role": "user",
90                 "content": prompt,
91             }
92         ],
93         model="gpt-3.5-turbo",
94     )
95
96     # Returns the content of the response
97     return response.choices[0].message.content
98
99 # Main function that runs the program
100 def main():
```

```
99     text_to_speech("Hello What Can I Do For You Today?")
100     while True:
101         # Listens for a voice command
102         command = listen_for_command()
103         if command:
104             # Checks if the command contains certain keywords
105             if any(word in command for word in ["who", "what", "when", "where", "how",
106 "should", "why", "will", "would", "can", "could", "do", "does", "is", "are", "am", "was",
107 "were", "have", "has", "had", "which", ]):
108                 # Gets a response from GPT-3
109                 response = chatGPT_response(command)
110
111                 # Converts the response to speech
112                 text_to_speech(response)
113
114             # open chrome if user says open chrome
115             if "open chrome" in command:
116                 text_to_speech("Opening Chrome.")
117
118                 # Opens Google Chrome to the Google homepage
119                 webbrowser.open('http://google.com')
120
121             # exit if user says exit
122             if "exit" in command:
123                 text_to_speech("Goodbye.")
124
125             # Breaks the loop, ending the program
126             break
127         else:
128             text_to_speech("Sorry, I don't understand that command.")
129
130 # Checks if the script is the main program and runs it
131 if __name__ == '__main__':
132     main()
```