README - GuineaPigGPT

This script allows you to interact with an AI assistant that simulates the responses of an excited guinea pig named Maple. It leverages OpenAI's GPT-3 for generating responses and Microsoft's Azure Cognitive Services for speech-to-text and text-to-speech functionalities.

Prerequisites

1. **Python 3.6+**
   You need to have Python 3.6 or newer installed on your machine. You can download it from the official website - https://www.python.org/downloads/

2. **Microsoft Azure Account**
   You will need a Microsoft Azure account and a subscription key for the Speech Service. You can get these from the Azure portal. Detailed instructions are available at - https://docs.microsoft.com/en-us/azure/cognitive-services/speech-service/get-started

3. **OpenAI API key**
   You will also need an API key from OpenAI. You can get this by creating an account at - https://beta.openai.com/signup/

Installation

1. **Download the script**
   Save the script as a Python file (.py extension) on your local machine. You can use any text editor to save the code.

2. **Install the necessary Python packages**
   Open a terminal (Command Prompt on Windows, Terminal.app on macOS), navigate to the directory where you saved the Python script, and install the required packages using pip:

   ```
   cd path_to_your_script
   pip install openai azure.cognitiveservices.speech simpleaudio
   ```

The script you provided requires the following Python packages:

1. **openai**: This is the Python client library for the OpenAI API. It allows you to interact with OpenAI's models like GPT-3.

2. **azure.cognitiveservices.speech**: This is the Python SDK for Microsoft's Azure Cognitive Services, particularly the Speech service. It provides features for speech recognition (Speech-to-Text) and speech synthesis (Text-to-Speech).

3. **simpleaudio**: This is a Python library for playing audio. It's used in the script to play back the generated speech.

4. **time**: This is a built-in Python module for time-related functions. It's used in the script to introduce a delay before the next recording.

You can install the first three packages using pip, which is the package installer for Python. The command would be:

```
pip install openai azure-cognitiveservices.speech simpleaudio
```

The `time` module doesn't need to be installed separately as it's part of Python's standard library.

Usage

1. **Update the API keys**
   Open the script file in a text editor and replace the placeholder strings `"AZURE_KEY"` and `"OPENAI_KEY"` with your actual Azure and OpenAI API keys.

   ```
   # Set your Azure Speech Service credentials
   speech_key = "your_azure_key_here"
   service_region = "eastus"

   # Set your OpenAI API key
   openai.api_key = "your_openai_key_here"
   ```

2. **Run the script**
   Go back to your terminal and run the script with Python:

   ```
   python script_name.py
   ```

   Replace `script_name.py` with the name of your Python file.

3. **Use the voice assistant**
   You can now interact with Maple, the AI voice assistant. Speak into your microphone to communicate. You can say "exit" or "quit" anytime to stop the program.

Troubleshooting

If you encounter any issues while using the script, please check the following:

1. **Check your keys**
   Make sure that you have correctly set your Azure and OpenAI keys and that they are active.

2. **Check your microphone**
   The script requires access to your microphone to capture your voice inputs. Make sure your microphone is working correctly.

3. **Check your speaker**
   The script plays back responses through your system's speakers. Make sure they are working correctly.

4. **Check for errors**
   If the script crashes or exits unexpectedly, it will usually print an error message in the terminal. These messages can often help identify the problem.