**Requirements:**

google-cloud-storage bucket

google-cloud-speech to text API

ffmpeg

genai

openai

transformers

google-cloud-aiplatform VertexAI

**Configuration:**

import os

ROOT\_PATH = os.getcwd()

BUCKET\_NAME = 'transcript\_download'

VIDEO\_EXTENSIONS = ['mp4', 'ogg', 'webm', 'avi', 'mov', 'mpg']

AUDIO\_EXTENSIONS = ['mp3', 'MP3', 'm4a', 'wma', 'wav']

**Ffmpeg Installation:**

**macOS**:

**a)Using Homebrew (recommended):**

Open Terminal (you can find it in the Utilities folder within the Applications folder).

Install Homebrew if you haven't already by following the instructions at https://brew.sh/.

Once Homebrew is installed, run the following command in Terminal to install FFmpeg:

Copy code

brew install ffmpeg

**b)Using a manual download (not recommended):**

1. You can download a macOS build of FFmpeg from the official website: https://www.ffmpeg.org/download.html
2. After downloading, extract the contents to a folder of your choice.
3. You may need to add the folder containing the FFmpeg executable to your PATH environment variable. It's generally not recommended on macOS, as Homebrew or MacPorts handle this for you.

To set up and run the provided Python script successfully, you need to meet certain requirements related to libraries, cloud services, and API access. Here's a setup guide and the requirements for running the script:

**Setup and Requirements:**

**1. Python Environment:**

- Make sure you have Python 3.x installed on your system.

**2. Install Required Libraries:**

- Install the necessary Python libraries by running the following command:

```

pip install google-cloud-storage ffmpy openai google-cloud-speech

```

- Note: Some of the libraries may have additional dependencies that need to be installed. If you encounter any errors during installation, carefully review the error messages and install the missing dependencies accordingly.

**3. Google Cloud Account and Setup:**

- You need a Google Cloud account with appropriate permissions to use the Google Cloud Storage and Google Cloud Speech-to-Text services.

- Set up a project on Google Cloud Console, enable the Google Cloud Storage and Google Cloud Speech-to-Text APIs, and create a service account with the necessary IAM roles (e.g., Storage Object Admin, Speech-to-Text Admin) and generate a JSON key file for authentication.

- Set the `GOOGLE\_APPLICATION\_CREDENTIALS` environment variable to the path of the JSON key file.

**4. OpenAI API Access**

- To use the OpenAI GPT-3.5 Turbo API, you need to have API access and an API key from OpenAI.

- Sign up for access on the OpenAI website and obtain the API key.

**5. Vertex AI Text Generation Model:**

- The script utilizes a text generation model from Vertex AI for text summarization.

- You need access to this model, and its name should be specified in the `extract\_summary\_using\_gen\_ai\_gcp()` function.

**6. Custom Configuration (`config.py`):**

- The script imports a module called `config.py` for configuration settings.

- Create a `config.py` file in the same directory as the script and define the necessary configuration variables such as `BUCKET\_NAME`, `ROOT\_PATH`, `VIDEO\_EXTENSIONS`, and `AUDIO\_EXTENSIONS`. These settings might be specific to your project.

**Execution:**

- After setting up the requirements and making sure all the dependencies are met, you can execute the script by running it with the following command:

```

python your\_script.py