Internship Projects

Setup:

Libraries :

All basic libraries are required below are some specific libraries for cloud processing

pip install --upgrade google-api-python-client

pip install google-cloud-storage

pip install google-cloud

pip install google-cloud-speech

pip install google-cloud-dlp

pip install fpdf

pip install pdf2image

pip install cmake

pip install face-recognition

pip install python_speech_features

pip install --upgrade google-cloud-videointelligence

To be enabled APIs :

1. Speech to text
2. Cloud storage
3. Cloud vision
4. Cloud Data Loss Prevention (DLP)
5. Cloud Video Intelligence API

Label :

export GOOGLE_APPLICATION_CREDENTIALS = "path_to/gigx-intern-cd3dfc7a1eca.json"

Note Points :

- Give owner privileges to service account you are creating before downloading the credential json key file

Transcription

Function : data_transcriptor

Output : No output, file_name + transcript.txt will be uploaded to the bucket

Setup parameters : path_to_directory (local storage), path_to_bucket, path_to_json bucket_name

Running:

Command line Inputs : file_name   primary_language_code   separation

python3 transcriptor.py test.wav en 0

Redaction

Function : pdf_redactor

Output : No output, modfied_ + file_name will be uploaded to the bucket

Setup parameters : projectName, path_to_bucket, bucket_name, inDir, outDir

Give separate directory for inDir and outDir not the pwd at the end of program all the files in this directory are deleted

Running:

Command line Inputs : file_name (only pdf file)

python3 pdf_redactor.py Test_Resume.pdf

Recognition

Function : video_face_recognition, photo_face_recognition, audio_recognition

Output : Matched or Not Matched, for audio the output is name of the best match from the directory

Setup parameters : jsonPath, bucketName

Running:

The parameters are the path to photo/video in the local directory. The code to download from the cloud is also written and commented on.

Command line Inputs : input_photo, testing_video (format can be mp4 or webm)

python3 video_face_recognition.py my_photo.jpg my_video.webm

Command line Inputs : input_photo, testing_pic (jpg)

python3 photo_face_recognition.py biden.jpg biden.jpg

Command line Inputs : input_audio,test_directory

python3 audio_recognition.py input_audio test_directory

Content Analysis

Function : video_content_analysis, photo_content_analysis

Output : content is analysed and analysis file is uploaded to cloud (Refer a sample file for format of analysis)

Setup parameters : path_to_bucket, path_to_json, bucket_name.

Running:

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Command line Inputs : input_photo (jpg)

python3 photo_content_analysis.py obscene3.jpg

Command line Inputs : input_video (any general format)

python3 video_content_analysis.py my_video.webm

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