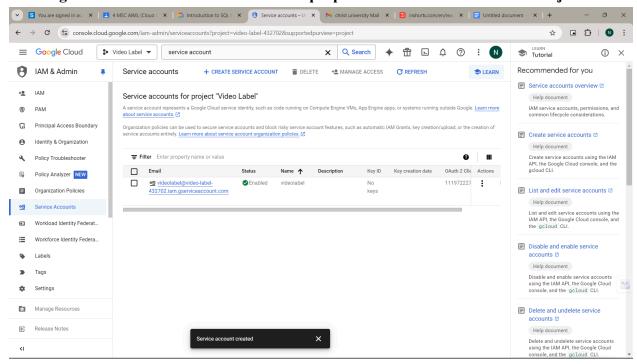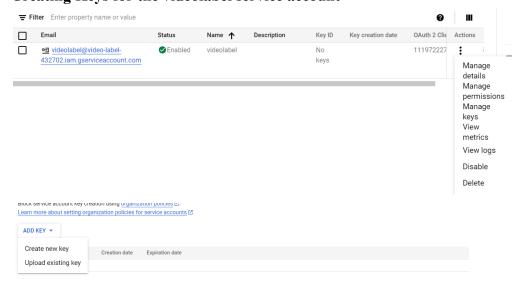**Noel Mathew Thomas**

2348538
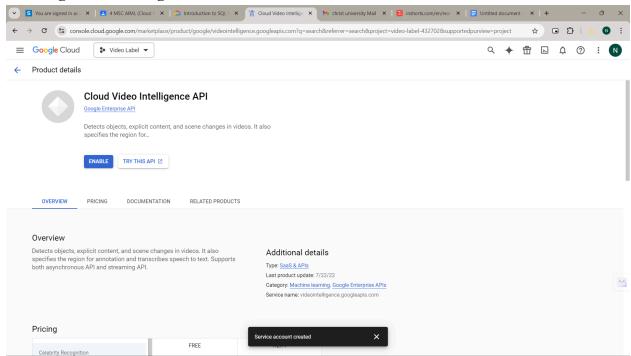
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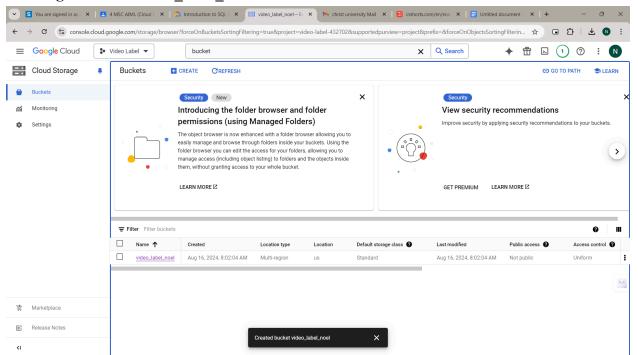## 1. Creating Service Account "videolabel" with proper roles for the Video Label Project

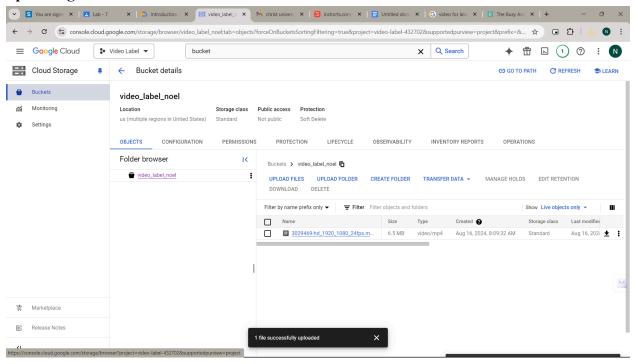## 2. Creating Keys for the videolabel service account

3. Enabling Cloud Intelligence API

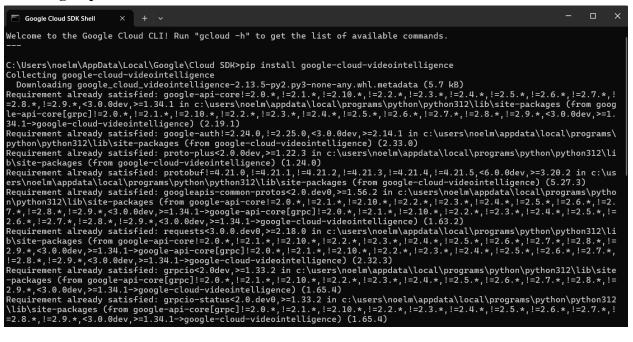### 4. Creating a bucket "video_label_noel"

5. **Uploading Video to the bucket**

6. **Installing required libraries**

7. **Specifying the credentials**

```
C:\Users\noelm\AppData\Local\Google\Cloud SDK>set GOOGLE_APPLICATION_CREDENTIALS = c:\\Users\\noelm\\AppData\\Local\\Goo
gle\\Cloud SDK\\video-label-432702-218a192c342b.json
```

8. **Creating and saving the python file in the same folder as the SDK**

```python
import os
os.environ["GOOGLE_APPLICATION_CREDENTIALS"] = "c:\\Users\\noelm\\AppData\\Local\\Google\\Cloud SDK\\video-label-432702-218a192c342b.json"


from google.cloud import videointelligence_v1 as videointelligence
def analyze_labels_in_video(gcs_uri):
    video_client = videointelligence.VideoIntelligenceServiceClient()
    features = [videointelligence.Feature.LABEL_DETECTION]
    operation = video_client.annotate_video(
        request={"features": features, "input_uri": gcs_uri}
    )

    print("Processing video for label detection...")
    result = operation.result(timeout=90)
    print("Finished processing.")

    annotation_results = result.annotation_results[0]

    for label in annotation_results.segment_label_annotations:
        print(f"Label: {label.entity.description}")
        for category in label.category_entities:
            print(f" - Category: {category.description}")

gcs_uri = "gs://video_label_noel/3029469-hd_1920_1080_24fps.mp4"
analyze_labels_in_video(gcs_uri)
```

9. **Running the python script**

```
C:\Users\noelm\AppData\Local\Google\Cloud SDK>python cc_lab7.py
Processing video for label detection...
Finished processing.
Label: public space
 - Category: city
Label: urban area
 - Category: city
Label: city
 - Category: geographical feature
Label: times square
Label: downtown
 - Category: city
Label: new york city
Label: street
 - Category: road
Label: pedestrian
 - Category: person
```