

Video Intelligence: Qwik Start

GSP154

Google Cloud Self-Paced Labs

- Google Cloud Video Intelligence API extracts metadata from videos via REST API, making video catalogs fully searchable.
- It annotates Cloud Storage videos to identify key entities, timestamps, and occurrences across entire videos or frame-by-frame.
- This lab teaches setting up authorization using a custom service account for secure API access.
- You'll construct and send an annotate video request to the Video Intelligence API.
- Extract relevant metadata including entities, shots, and timestamps from processed video content.



https://partner.skills.google/course_templates/631/labs/594535



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Time limit

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[Learn more.](#)

[Open Google Cloud console](#)

Username

student-02-dc49111c3d0c@qwiklabs.net

Password

URSWPP8VUec4

Project ID

qwiklabs-gcp-02-b867efc

Student Resources

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3. (Optional) You can list the active account name with this command:

```
gcloud auth list
```

4. Click **Authorize**.

Output:

```
ACTIVE: *
ACCOUNT: student-02-dc49111c3d0c@qwiklabs.net
```

To set the active account, run:

```
$ gcloud config set account `ACCOUNT`
```

5. (Optional) You can list the project ID with this command:

```
gcloud config list project
```

Output:

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Welcome to Cloud Shell! Type "help" to get started, or type "gemini" to try prompting with Gemini CLI.
Your Cloud Platform project in this session is set to **wikilabs-gcp-02-b867efc1387d**.

```
Use `gcloud config set project [PROJECT_ID]` to change to a different project.  
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$ gcloud auth list  
Credentials Accounts
```

```
ACTIVE: *
ACCOUNT: student-02-dc49111c3d0c@qwiklabs.net
```

To set the active account, run:
 \$ qcloud config set account `ACCOUNT`

```
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$ gcloud config list project  
[core]  
project = qwiklabs-gcp-02-b867efc1387d
```

```
Your active configuration is: [cloudshell-11719]
student 02 dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$
```



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Username

student-02-dc49111c3d0c



Password

URSWPP8VUec4



Project ID

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Task 1. Set up authorization

For this lab, you create and use a service account that is tied to your Google Cloud project for authorization.

1. In Cloud Shell, run the following command to create a new service account named `quickstart`:

```
gcloud iam service-accounts create quickstart
```

2. Create a service account key file, replacing `<your-project-123>` with your Project ID:

```
gcloud iam service-accounts keys create key.json --iam-account quickstart@<your-project-123>.iam.gserviceaccount.com
```

3. Now authenticate your service account, passing the location of your service account key file:

```
gcloud auth activate-service-account --key-file key.json
```

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Gemini CLI is available in Cloud Shell terminal! Type gemini to try it. [Learn more](#)

student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)\$ gcloud iam service-accounts create quickstart
Created service account [quickstart].
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)\$
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)\$

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00:41:56

End Lab

Time limit

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Congratulations!

`gcloud iam service-accounts create quickstart`

2. Create a service account key file, replacing <your-project-123> with your Project ID:

`gcloud iam service-accounts keys create key.json --iam-account quickstart@<your-project-123>.iam.gserviceaccount.com`

3. Now authenticate your service account, passing the location of your service account key file:

`gcloud auth activate-service-account --key-file key.json`

4. Obtain an authorization token using your service account:

`gcloud auth print-access-token`

The token will print in the output, and you'll be using it in a future step.

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```
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$ gcloud iam service-accounts create quickstart
Created service account [quickstart].
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$ gcloud iam service-accounts keys create key.json --iam-account quickstart@qwiklabs-gcp-02-b867efc1387d.iam.gserviceaccount.com
created key [e1ac7e4317469b9f5aa8b5b1c104c5a70920e0ba] of type [json] as [key.json] for [quickstart@qwiklabs-gcp-02-b867efc1387d.iam.gserviceaccount.com]
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$ gcloud auth activate-service-account --key-file key.json
Activated service account credentials for: [quickstart@qwiklabs-gcp-02-b867efc1387d.iam.gserviceaccount.com]
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$ gcloud auth print-access-token
ya29.c.c0AYnqXlh9btSIDOCOJ70Bol_ZotJas00r7jHa2FdLhtIEa73JLMNSIUMBZr2sQ8I-F_2Vj1WdzRkPXfwgT8KcvIFDx1C1cSBbYxdhAkXYmlGR1XwCOhPnMCrD57U0Kk6PCYG8-W1FuZagdRxJCK_6DhJb_1rFR3d0v1otwLj8w7uFUiCXW02GQyPxP5xhPLTc79_CW3qPKJ2p5S6R8R7HycLc_LuTgiepleWKQa8TnHRw7pPMyvSsy9AyOWE6A4uJabotfvjvGC3NiyltRALm5a92Tudgj0ql1BC9n11WL0TFDqu64f5qq66lgTMDCUF1PDvKyz3eQ4a7xFrzQ9PMJWIeUw3moyIbG66xPqaYVt2RV0tkNH7BYJP9sS9eQDWY_UJLDE397Kc7Mib4405_V8J0sM7vawy4ut8WIUnWW4fxX8XXSz3_1fYVuOWtavehoz8ifZkux-RcaxUMdZBc-goe7F9tQjnMz0vh1JygRxI8_8xs3tWhUvYcggyUbMx6hFcaxncdQfBmx1mOu4v0y1sQwMxfQZpaf2jVwfyl13U2W-JI301vm5ob_545_RrRxQ6a9I-s7mif0cZ3b1c1Y6jhvsObk17yg4SQZSIUM1kYp2feR4a88hqd00eqoXMgaj_n2mW_xdzdB0u89qpS0VoeM08-ZsIt9xxe7jgpexQXcUjftd69Ygj4brsrUtjuafZWUdWVnyZ7d1l28kRUMVId-iq81-MRSewjWveM2cU6frlw0Of6mc63wiXdv00rRRJ7r7V2oZdlfo7-tY0v-2BjqMgyrnB1YigqOmV8hrFZ2V-qyS6Yv6ujR6U1ydWJcruxkI8t2cM1Ihyjh_mv7mWF7_eB0qdQzfBXWtif8V85ga73Mhgdruz-V1IJRdeeY3p5XVupjibX0sjau80ZhviyJfFshe_q3zb603FZ9FuqfJJ07w9ti50JYY7zoX6--VFJVmQWyn68Yq9y2o7u3zY-9V4VSpjvuluyz7rBdan1QY8y1Jpm0Z
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$ ^C
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$
```



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[Learn more.](#)[Open Google Cloud console](#)

Username

student-02-dc49111c3d0c



Password

URSWPP8VUec4



Project ID

qwiklabs-gcp-02-b867efc



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Congratulations!

Task 2. Make an annotate video request

Note: In this lab, the Cloud Video Intelligence API is already enabled for you.

- Run this command to create a JSON request file with the following text, and save it as `request.json`:

```
cat > request.json <<EOF
{
  "inputUri": "gs://spl/gsp154/video/train.mp4",
  "features": [
    "LABEL_DETECTION"
  ]
}
EOF
```

Note: To make the process simpler, a public video of a train available to your project is used as the value for your `inputUri`. If preferred or running in a personal project, any video can be used in place by uploading it to Cloud Storage and providing its Cloud Storage URI (format: `gs://bucket/object`) for the value of `inputUri`.

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student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)\$ cat > request.json <<EOF
{
 "inputUri": "gs://splz/gsp154/video/train.mp4",
 "features": [
 "LABEL_DETECTION"
]
}EOF
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)\$

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End Lab



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Username

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Password

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Congratulations!

2. Use curl to make a videos:annotate request passing the filename of the entity request:

```
curl -s -H 'Content-Type: application/json' \
      -H 'Authorization: Bearer '$(gcloud auth print-access-
      token)'' \
      'https://videointelligence.googleapis.com/v1/videos:annotate' \
      -d @request.json
```

The Video Intelligence API creates an operation to process your request. You should now see a response that includes your operation name, which should look similar to this one:

```
{
  "name": "projects/474887704060/locations/asia-
  east1/operations/16366331060670521152"
}
```

You will use this operation name, locations and projects in the future step.

3. Use this script to request information on the operation by calling the

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student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)\$ cat > request.json <<EOF
{
 "inputUri": "gs://splz/gsp154/video/train.mp4",
 "features": [
 "LABEL_DETECTION"
]
}EOF
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)\$ curl -s -H 'Content-Type: application/json' \
-H 'Authorization: Bearer \$(gcloud auth print-access-token)' \
'https://videointelligence.googleapis.com/v1/videos:annotate' \
-d @request.json
{
 "name": "projects/129268078234/locations/us-east1/operations/299082906369137752"
}
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)\$

Note: This was used to enter details in the next step:
"name": "projects/129268078234/locations/us-east1/operations/299082906369137752"

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00:39:01

Time limit

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Username

student-02-dc49111c3d0c



Password

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Project ID

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Video Intelligence: Qwik Start

You will use this operation name, locations and projects in the future step.

3. Use this script to request information on the operation by calling the `v1.operations` endpoint. Replace the `PROJECTS`, `LOCATIONS` and `OPERATION_NAME` with the value you just received in the previous command:

```
curl -s -H 'Content-Type: application/json' \
      -H 'Authorization: Bearer $(gcloud auth print-access-
token)'' \
      'https://videointelligence.googleapis.com/v1/projects/PROJECTS/locat
      ion/OPERATION_NAME'
```

You'll now see information related to your operation. If the operation has completed, a `done` field is included and set to `true`:

```
{
  "name": "projects/425437283751/locations/asia-
east1/operations/17938636079131796601",
  "metadata": {
    "@type": "
```

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Username

student-02-dc49111c3d0c



Password

URSWPP8VUec4



Project ID

qwiklabs-gcp-02-b867efc



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```
"entityId": "/m/01yrx",
"languageCode": "en-US"
},
"segments": [
{
"segment": {
"startTimeOffset": "0s",
"endTimeOffset": "14.833664s"
},
"confidence": 0.98509187
}
]
},
...
]
```

You've sent your first request to Cloud Video Intelligence API.

Click **Check my progress** to verify the objective.[Make an annotate video request](#)[Check my progress](#)

Assessment Completed!

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```
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$ curl -s -H 'Content-Type: application/json' \
-H 'Authorization: Bearer $(gcloud auth print-access-token)' \
'https://videointelligence.googleapis.com/v1/projects/129268078234/locations/us-east1/operations/299082906369137752'
{
  "name": "projects/129268078234/locations/us-east1/operations/299082906369137752",
  "metadata": {
    "@type": "type.googleapis.com/google.cloud.videointelligence.v1.AnnotateVideoProgress",
    "annotationProgress": [
      {
        "inputUri": "/spl/gsp154/video/train.mp4",
        "progressPercent": 100,
        "startTime": "2025-12-28T15:39:56.914Z",
        "updateTime": "2025-12-28T15:40:01.482Z"
      }
    ]
  },
  "done": true,
  "response": {
    "@type": "type.googleapis.com/google.cloud.videointelligence.v1.AnnotateVideoResponse",
    "annotationResults": [
      {
        "inputUri": "/spl/gsp154/video/train.mp4",
        "segmentLabelAnnotations": [
          {
            "entity": {
              "entityId": "/m/05zdp",
              "description": "public transport",
              "languageCode": "en-US"
            },
            "categoryEntities": [
              {
                "category": "Public Transport"
              }
            ]
          }
        ]
      }
    ]
  }
}
```

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```
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$ curl -s -H 'Content-Type: application/json' \
-H 'Authorization: Bearer $(gcloud auth print-access-token)' \
'https://videointelligence.googleapis.com/v1/projects/129268078234/locations/us-east1/operations/299082906369137752'
{
  "name": "projects/129268078234/locations/us-east1/operations/299082906369137752",
  "metadata": {
    "@type": "type.googleapis.com/google.cloud.videointelligence.v1.AnnotateVideoProgress",
    "annotationProgress": [
      {
        "inputUri": "/spl/gsp154/video/train.mp4",
        "progressPercent": 100,
        "startTime": "2025-12-28T15:39:56.914Z",
        "updateTime": "2025-12-28T15:40:01.482Z"
      }
    ]
  },
  "done": true,
  "response": {
    "@type": "type.googleapis.com/google.cloud.videointelligence.v1.AnnotateVideoResponse",
    "annotationResults": [
      {
        "inputUri": "/spl/gsp154/video/train.mp4",
        "segmentLabelAnnotations": [
          {
            "entity": {
              "entityId": "/m/05zdp",
              "description": "public transport",
              "languageCode": "en-US"
            },
            "categoryEntities": [
              {
                "category": "Public Transport"
              }
            ]
          }
        ]
      }
    ]
  }
}
```


Dashboard – qwiklabs-gcp-02-b... +

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```
entityId": "/m/05zdp",
student_02_dc49111c3d0c@cloudshell:~ (qwiklabs-gcp-02-b867efc1387d)$ curl -s -H 'Content-Type: application/json' -H 'Authorization: Bearer $(gcloud auth print-access-token)' 'https://videointelligence.googleapis.com/v1/projects/129268078234/locations/us-east1/operations/299082906369137752'
{
  "name": "projects/129268078234/locations/us-east1/operations/299082906369137752",
  "metadata": {
    "@type": "type.googleapis.com/google.cloud.videointelligence.v1.AnnotateVideoProgress",
    "annotationProgress": [
      {
        "inputUri": "/spl/gsp154/video/train.mp4",
        "progressPercent": 100,
        "startTime": "2025-12-28T15:39:56.914Z",
        "updateTime": "2025-12-28T15:40:01.482Z"
      }
    ],
    "done": true,
    "response": {
      "@type": "type.googleapis.com/google.cloud.videointelligence.v1.AnnotateVideoResponse",
      "annotationResults": [
        {
          "inputUri": "/spl/gsp154/video/train.mp4",
          "segmentLabelAnnotations": [
            {
              "entity": {
                "entityId": "/m/05zdp",
                "description": "public transport",
                "languageCode": "en-US"
              },
              "categoryEntities": [
                {
                  "category": "Public Transport"
                }
              ]
            }
          ]
        }
      ]
    }
  }
}
```

7 11°C Mostly clear

Search

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