# GSP323: Perform Foundational Data, ML, and AI Tasks in Google Cloud

Task - 1 : Run a simple Dataflow job

1bq mk lab

2

3gsutil cp gs://cloud-training/gsp323/lab.csv .

4

5cat lab.csv

6

7gsutil cp gs://cloud-training/gsp323/lab.schema .

8

9cat lab.schema

### Task - 4 : AI

1gcloud iam service-accounts create my-natlang-sa \

2 --display-name "my natural language service account"

3

4gcloud iam service-accounts keys create ~/key.json \

5 --iam-account my-natlang-sa@${GOOGLE\_CLOUD\_PROJECT}.iam.gserviceaccount.com

6

7export GOOGLE\_APPLICATION\_CREDENTIALS="/home/$USER/key.json"

8

9gcloud auth activate-service-account my-natlang-sa@${GOOGLE\_CLOUD\_PROJECT}.iam.gserviceaccount.com --key-file=$GOOGLE\_APPLICATION\_CREDENTIALS

10

11gcloud ml language analyze-entities --content="Old Norse texts portray Odin as one-eyed and long-bearded, frequently wielding a spear named Gungnir and wearing a cloak and a broad hat." > result.json

12

13gcloud auth login

14(Copy the token from the link provided)

15

16

17gsutil cp result.json gs://YOUR\_PROJECT-marking/task4-cnl.result

#### Create an API key and export as API\_KEY variable.

1export API\_KEY={Replace with API KEY}

2

3nano request.json

Add this content:

1{

2 "config": {

3 "encoding":"FLAC",

4 "languageCode": "en-US"

5 },

6 "audio": {

7 "uri":"gs://cloud-training/gsp323/task4.flac"

8 }

9}

curl -s -X POST -H "Content-Type: application/json" --data-binary @request.json \

2"https://speech.googleapis.com/v1/speech:recognize?key=${API\_KEY}" > result.json

3

4gsutil cp result.json gs://YOUR\_PROJECT-marking/task4-gcs.result

5

6

7gcloud iam service-accounts create quickstart

8

9gcloud iam service-accounts keys create key.json --iam-account quickstart@${GOOGLE\_CLOUD\_PROJECT}.iam.gserviceaccount.com

10

11gcloud auth activate-service-account --key-file key.json

12

13export ACCESS\_TOKEN=$(gcloud auth print-access-token)

14

15

16nano request.json

Add this content:

1{

2 "inputUri":"gs://spls/gsp154/video/chicago.mp4",

3 "features": [

4 "TEXT\_DETECTION"

5 ]

6}

Now add the following commands on the command line:

1curl -s -H 'Content-Type: application/json' \

2 -H "Authorization: Bearer $ACCESS\_TOKEN" \

3 'https://videointelligence.googleapis.com/v1/videos:annotate' \

4 -d @request.json

5

6

7

8curl -s -H 'Content-Type: application/json' -H "Authorization: Bearer $ACCESS\_TOKEN" 'https://videointelligence.googleapis.com/v1/operations/OPERATION\_FROM\_PREVIOUS\_REQUEST' > result1.json

9

10

11gsutil cp result1.json gs://YOUR\_PROJECT-marking/task4-gvi.result