

Cloud Natural Language API Qwik Start

GSP097



- Natural language processing (NLP) enables computers to understand and interact with human language like people do.
- The Cloud Natural Language API offers cloud-based NLP services to analyze text and extract meaningful insights.
- Key features include entity recognition to identify people, places, and objects in text.
- It provides sentiment analysis to detect positive, negative, or neutral tones in content.
- Additional capabilities cover information extraction for dates/prices and question answering via integrated REST API.

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Prepare Data for ML APIs on Google

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00:59:48
⌚ Time limit

⚠️ Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

Open Google Cloud console

Username

student-00-baf58f87ccd5📋

Password

C5i0j5tWBCK3📋

Project ID

qwiklabs-gcp-03-7ccf8c1📋

Student Resources

📄 Gain Valuable Insights from Text

gcloud auth list

Copied! 📋

4. Click **Authorize**.

Output:

ACTIVE : *
ACCOUNT : student-00-baf58f87ccd5@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:

[core]

Lab instructions and tasks 0/100

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Dashboard – qwiklabs-gcp-03-7c

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https://console.cloud.google.com/home/dashboard?project=qwiklabs-gcp-03-7ccf8c1c6d73&pli=1&cloudshell=true

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📄 CLOUD SHELL

Terminal (qwiklabs-gcp-03-7ccf8c1c6d73) × + ▾

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📘 Gemini CLI is available in Cloud Shell terminal! Type gemini to try it. [Learn more](#) Don't show again Dismiss

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 **qwiklabs-gcp-03-7ccf8c1c6d73**.
Use ``gcloud config set project [PROJECT_ID]`` to change to a different project.
student_00_baf58f87ccd5@cloudshell:~ (**qwiklabs-gcp-03-7ccf8c1c6d73**)\$ `gcloud auth list`
Credentialed Accounts

ACTIVE: *
ACCOUNT: student-00-baf58f87ccd5@qwiklabs.net

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

student_00_baf58f87ccd5@cloudshell:~ (**qwiklabs-gcp-03-7ccf8c1c6d73**)\$ `gcloud config list project`
[core]
project = qwiklabs-gcp-03-7ccf8c1c6d73

Your active configuration is: [cloudshell-9567]
student_00_baf58f87ccd5@cloudshell:~ (**qwiklabs-gcp-03-7ccf8c1c6d73**)\$

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End Lab

00:56:58

⌚ Time limit

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Open Google Cloud console

Username

student-00-baf58f87ccd5f

📄

Password

C5i0j5tWBCK3

📄

Project ID

qwiklabs-gcp-03-7ccf8c1

📄

Student Resources

📄 Gain Valuable Insights from Text

Task 1. Create an API key

1. First, you will set an environment variable with your PROJECT_ID which you will use throughout this lab:

export GOOGLE_CLOUD_PROJECT=\$(gcloud config get-value core/project)

2. Next, create a new service account to access the Natural Language API:

gcloud iam service-accounts create my-natlang-sa \n--display-name "my natural language service account"

3. Then, create credentials to log in as your new service account. Create these credentials and save it as a JSON file "~/key.json" by using the following command:

gcloud iam service-accounts keys create ~/key.json \n--iam-account my-natlang-

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② Time limit

[Learn more.](#)

[Open Google Cloud console](#)

Username
student-00-baf58f87ccd50

Password

Project ID

Student Resources

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2. Next, create a new service account to access the Natural Language API:

```
gcloud iam service-accounts create my-natlang-sa \
  --display-name "my natural language service account"
```

3. Then, create credentials to log in as your new service account. Create these credentials and save it as a JSON file "`~/key.json`" by using the following command:

```
gcloud iam service-accounts keys create ~/key.json \
  --iam-account my-natlang-
sa@${GOOGLE_CLOUD_PROJECT}.iam.gserviceaccount.com
```

4. Finally, set the `GOOGLE_APPLICATION_CREDENTIALS` environment variable. The environment variable should be set to the full path of the credentials JSON file you created, which you can see in the output from the previous command:

```
export GOOGLE_APPLICATION_CREDENTIALS="/home/USER/key.json"
```

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```
student_00_baf58f87ccd5@cloudshell:~ (qwiklabs-gcp-03-7ccf8c1c6d73) $ export GOOGLE_CLOUD_PROJECT=$(gcloud config get-value core/project)
Your active configuration is: [cloudshell-9567]
student_00_baf58f87ccd5@cloudshell:~ (qwiklabs-gcp-03-7ccf8c1c6d73) $ gcloud iam service-accounts create my-natlang-sa \
--display-name "my natural language service account"
Created service account [my-natlang-sa].
student_00_baf58f87ccd5@cloudshell:~ (qwiklabs-gcp-03-7ccf8c1c6d73) $ gcloud iam service-accounts keys create ~/key.json \
--iam-account my-natlang-sa@${GOOGLE_CLOUD_PROJECT}.iam.gserviceaccount.com
Created key [70442412087d088633c62522f0854254b2ddbed0] of type [json] as [/home/student_00_baf58f87ccd5/key.json] for [my-natlang-sa@qwiklabs-gcp-03-7ccf8c1c6d73.iam.gserviceaccount.com]
student_00_baf58f87ccd5@cloudshell:~ (qwiklabs-gcp-03-7ccf8c1c6d73) $ export GOOGLE_APPLICATION_CREDENTIALS="/home/USER/key.json"
student_00_baf58f87ccd5@cloudshell:~ (qwiklabs-gcp-03-7ccf8c1c6d73) $
```

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00:54:34

⌚ Time limit

⚠️ Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

Open Google Cloud console

Username

student-00-baf58f87ccd5f

📋

Password

C5i0j5tWBCK3

📋

Project ID

qwiklabs-gcp-03-7ccf8c1c

📋

Student Resources

📄 Gain Valuable Insights from Text

📄 following provisioned linux instance.

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CREATE INSTANCE

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VM instances

Filter: Enter property name or value

Status	Name	Zone	Recommendations	Is used by	Internal IP	External IP	Current
🟢	gcp-03-7ccf8c1c	us-east1-b			10.125.0.2	34.71.280.58	SSH

Related actions

SHOW

1. Click on the **SSH** button. You will be brought to an interactive shell. **Remain in this SSH session for the rest of the lab.**

Now you'll try out the Natural Language API's entity analysis with the following sentence:

Michelangelo Caravaggio, Italian painter, is known for 'The Calling of Saint Matthew'

2. Run the following `gcloud` command:

```
gcloud ml language analyze-entities --content="Michelangelo Caravaggio, Italian painter, is known for 'The Calling of Saint Matthew'." > result.json
```

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Compute Engine

CPU (%)

100%

80%

60%

40%

20%

0

3:30 3:45 4 PM 4:15

instance/cpu/utilization: 0.23%

The data might not be complete due to potential unavailability

Google Cloud Platform status

All services normal

Go to Cloud status dashboard

Billing

Estimated charges

For the billing period Dec 1 – 28, 2025

USD \$0.00

Take a tour of billing

View detailed charges

Open Editor

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Don't show again Dismiss

of type [json] as [/home/student_00_baf58f87ccd5/key.json] for [my-natlang-sa@qwiklabs-gcp-03-7ccf8c

shell:~ (qwiklabs-gcp-03-7ccf8c1c6d73) \$ export GOOGLE_APPLICATION_CREDENTIALS="/home/USER/key.json"

shell:~ (qwiklabs-gcp-03-7ccf8c1c6d73) \$

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VM instances – Compute Engine

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https://console.cloud.google.com/compute/instances?cloudshell=true&project=qwiklabs-gcp-03-7ccf8c1c6d73

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VM instances

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VM instances

Filter Enter property name or value ⓘ ☰

<input type="checkbox"/>	Status	Name ↑	Zone	Recommendations	In use by	Internal IP	External IP	Connect
<input type="checkbox"/>	✔️	linux-instance	us-east1-c			10.142.0.2 (nic0)	34.74.72.167 (nic0)	SSH ▾ ⋮

Related actions

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📘 Gemini CLI is available in Cloud Shell terminal! Type gemini to try it. [Learn more](#) Don't show again Dismiss

created key [70442412087d088633c62522f0854254b2ddbed0] of type [json] as [/home/student_00_baf58f87ccd5/key.json] for [my-natlang-sa@qwiklabs-gcp-03-7ccf8c1c6d73.iam.gserviceaccount.com]
student_00_baf58f87ccd5@cloudshell:~ (qwiklabs-gcp-03-7ccf8c1c6d73) \$ export GOOGLE_APPLICATION_CREDENTIALS="/home/USER/key.json"
student_00_baf58f87ccd5@cloudshell:~ (qwiklabs-gcp-03-7ccf8c1c6d73) \$

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Groups

Create New Group

Name	Users	Permissions
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Connect

Show

ang-sa@gwiklabs-gcp-03-7ccf8c
on"

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End Lab

00:52:45

⌚ Time limit

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Open Google Cloud console

Username

student-00-baf58f87ccd5f

📄

Password

C5i0j5tWBCK3

📄

Project ID

qwiklabs-gcp-03-7ccf8c1c

📄

Student Resources

📄 Gain Valuable Insights from Text

Make an Entity Analysis Request

✓ Check my progress

Assessment Completed!

3. Run the below command to preview the output of result.json file:

cat result.json

📄

You should see a response similar to the following in the result.json file:

```
{  "entities": [    {      "name": "Michelangelo Caravaggio",      "type": "PERSON",      "metadata": {        "wikipedia_url": "http://en.wikipedia.org/wiki/Caravaggio",        "mid": "/m/020bg"      },      "salience": 0.83047235    }  ]}
```

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Check complete. Points earned: 50. Message: Assessment Completed!

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Marketplace

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CLOUD SHELL

Terminal

Gemini CLI is available in Cloud Shell to

created key [70442412087d088633c...
1c6d73.iam.gserviceaccount.com]
student_00_baf58f87ccd5@cloudshe
student_00_baf58f87ccd5@cloudshell:~ (qwiklabs-gcp-03-7ccf8c1c6d73) \$

ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-03-7ccf8c1c6d73/zones/us-east1-c/instances/linux-instance?authuser=0&hl=en_US&...

https://ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-03-7ccf8c1c6d73/zones/us-east1-c/instances/linux-instance?authuser...

SSH-in-browser

UPLOAD FILE

DOWNLOAD FILE

student-00-baf58f87ccd5@linux-instance:~\$ cat result.json

{
 "entities": [
 {
 "mentions": [
 {
 "text": {
 "beginOffset": 0,
 "content": "Michelangelo Caravaggio"
 },
 "type": "PROPER"
 },
 {
 "text": {
 "beginOffset": 33,
 "content": "painter"
 },
 "type": "COMMON"
 }
],
 "metadata": {
 "mid": "/m/020bg",
 "wikipedia_url": "https://en.wikipedia.org/wiki/Caravaggio"
 },
 "name": "Michelangelo Caravaggio",
 "salience": 0.82904786,
 "type": "PERSON"
 },
 {
 "mentions": [
 {
 "text": {
 "beginOffset": 25,
 "content": "Italian"
 },
 "type": "PROPER"
 }
],
 "metadata": {},
 }
],
}

ang-sa@qwiklabs-gcp-03-7ccf8c

on"

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SSH

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Clipboard Slides Editing

9 10 11 12 13

```
ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-03-7ccf8c1c6d73/zones/us-east1-c/instances/linux-instance?authuser=0&hl=en_US&...
https://ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-03-7ccf8c1c6d73/zones/us-east1-c/instances/linux-instance?authuser...
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE
{"type": "PERSON",
  },
  {
    "mentions": [
      {
        "text": {
          "beginOffset": 25,
          "content": "Italian"
        },
        "type": "PROPER"
      }
    ],
    "metadata": {},
    "name": "Italian",
    "salience": 0.13981608,
    "type": "LOCATION"
  },
  {
    "mentions": [
      {
        "text": {
          "beginOffset": 56,
          "content": "The Calling of Saint Matthew"
        },
        "type": "PROPER"
      }
    ],
    "metadata": {
      "mid": "/m/085_p7",
      "wikipedia_url": "https://en.wikipedia.org/wiki/The_Calling_of_Saint_Matthew"
    },
    "name": "The Calling of Saint Matthew",
    "salience": 0.031136045,
    "type": "EVENT"
  }
],
"language": "en"
}
student-00-baf58f87ccd5@linux-instance:~$
```