Cloud Natural Language API: Qwik Start

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1. Introduction

This lab demonstrates the **Cloud Natural Language API** to perform **entity analysis** on text. Key features explored:

- **Entity Recognition**: Identify people, places, and events.
- **Salience Scoring**: Measure entity importance in text.
- **Metadata Extraction**: Fetch Wikipedia links for entities.

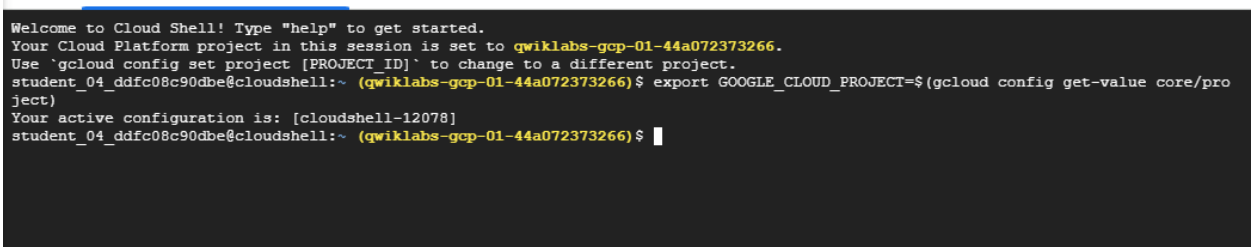
2. Task 1: Setting Up API Access

Steps Executed:

Created a Service Account:

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

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



Generated API Key (JSON):

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

--iam-account my-natlang-sa@${GOOGLE_CLOUD_PROJECT}.iam.gserviceaccount.com

```
student_04_ddfc08c90dbe@cloudshell:~ (qwiklabs-gcp-01-44a072373266)$ gcloud iam service-accounts create my-natlang-sa \
  --display-name "my natural language service account"
Created service account [my-natlang-sa].
student_04_ddfc08c90dbe@cloudshell:~ (qwiklabs-gcp-01-44a072373266)$
```

Set Environment Variable:

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

```
student_04_ddfc08c90dbe@cloudshell:~ (qwiklabs-gcp-01-44a072373266)$ gcloud iam service-accounts keys create ~/key.json \
  --iam-account my-natlang-sa@${GOOGLE_CLOUD_PROJECT}.iam.gserviceaccount.com
created key [34841ea88f449c16d35c8975feb866a19508728e] of type [json] as [/home/student_04_ddfc08c90dbe/key.json] for [my-natlang-s
a@qwiklabs-gcp-01-44a072373266.iam.gserviceaccount.com]
student_04_ddfc08c90dbe@cloudshell:~ (qwiklabs-gcp-01-44a072373266)$
```

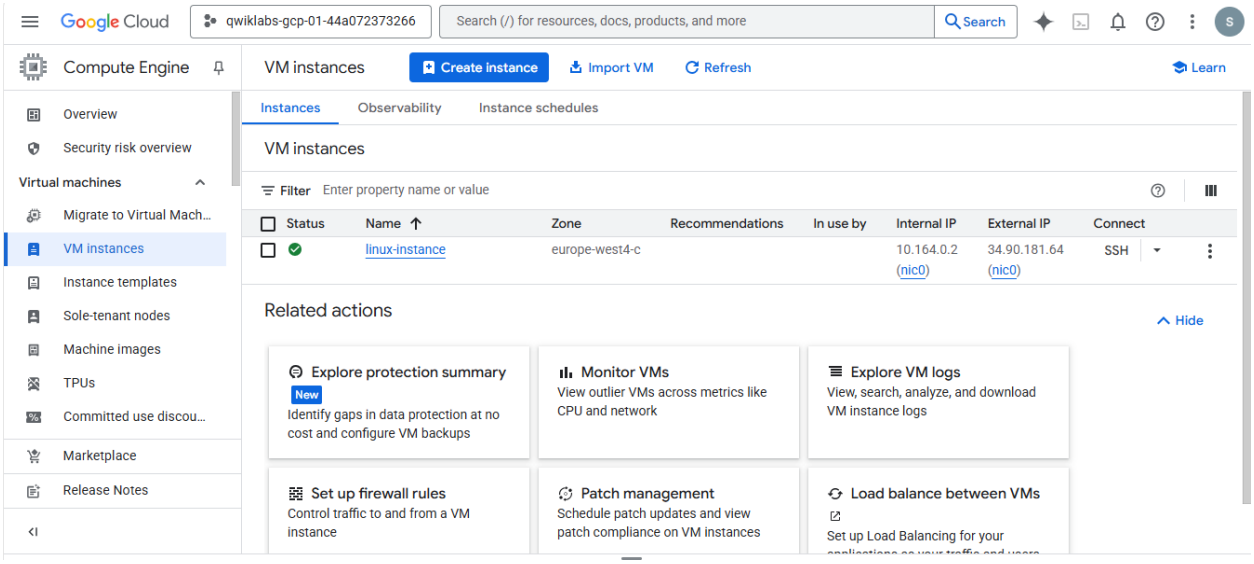
Purpose:

- Authenticate requests to the Natural Language API.

3. Task 2: Entity Analysis

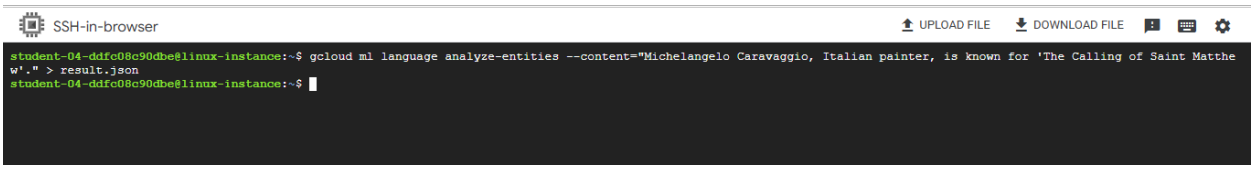
Text Analyzed:

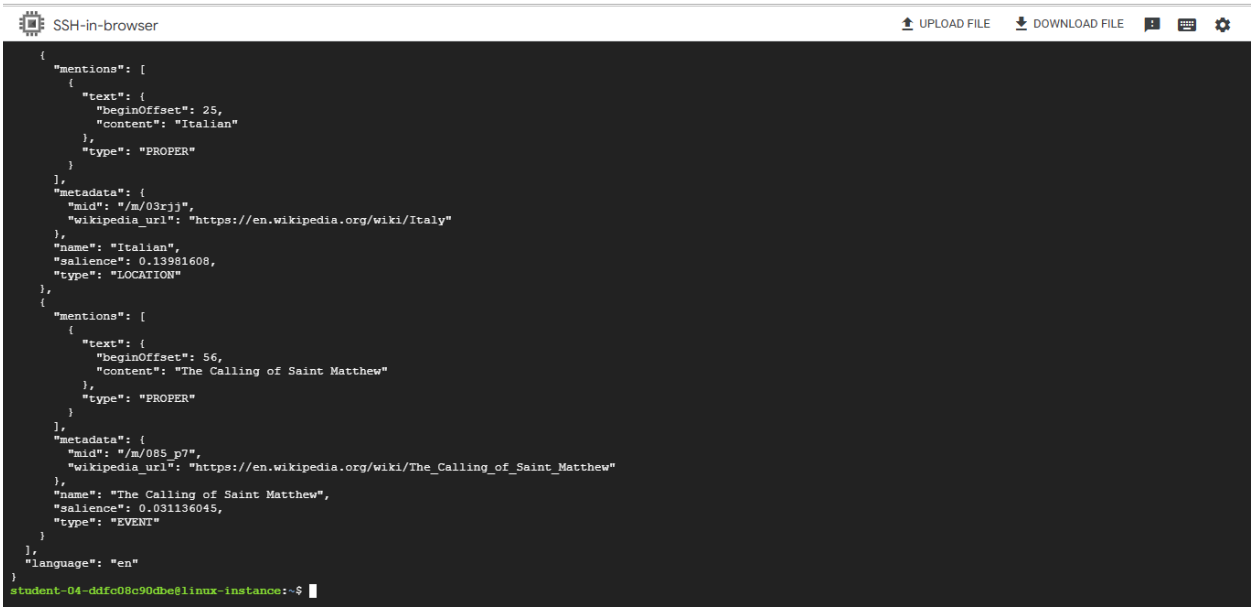
"Michelangelo Caravaggio, Italian painter, is known for 'The Calling of Saint Matthew'."



API Command:

gcloud ml language analyze-entities --content="Michelangelo Caravaggio..." > result.json





4. Key Findings

✅ **Precision**: Accurately identified entities (person, location, event).

✅ **Contextual Links**: Provided Wikipedia URLs for deeper research.

✅ **Salience Scoring**: Quantified entity importance (Caravaggio ≈ 83% dominant).

5. Conclusion

This lab successfully demonstrated:

- **API Setup**: Service accounts and credentials for secure access.
- **Entity Analysis**: Extracted and classified text entities with metadata.

Future Applications:

- **Content Moderation**: Flag improper entities in user-generated text.
- **Research Automation**: Extract key figures/events from academic papers.