# **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"

```
Welcome to Cloud Shell! Type "help" to get started.

Your Cloud Platform project in this session is set to qwiklabs-gcp-01-44a072373266.

Use `gcloud config set project [PROJECT_ID]` to change to a different project.

student_04_ddfc08c90dbe@cloudshell:~ (qwiklabs-gcp-01-44a072373266) * export GOOGLE_CLOUD_PROJECT= * (gcloud config get-value core/project)

Your active configuration is: [cloudshell-12078]

student_04_ddfc08c90dbe@cloudshell:~ (qwiklabs-gcp-01-44a072373266) *
```

# 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:~ (qw1klabs-gcp-01-44a0/23/3266)$ gcloud 1am service-accounts keys create ~/key.json \
--iam-account my-natlang-sa88{GOOGLE CLOUD PROJECT}.iam.gserviceaccount.com
created key [34841ea88f449c16d35c8975feb866a19508728e] of type [json] as [/home/student_04_ddfc08c90dbe/key.json] for [my-natlang-sa8qwiklabs-gcp-01-44a072373266.iam.gserviceaccount.com]
student_04_ddfc08c90dbe@cloudshell:~ (qwiklabs-gcp-01-44a072373266)$
```

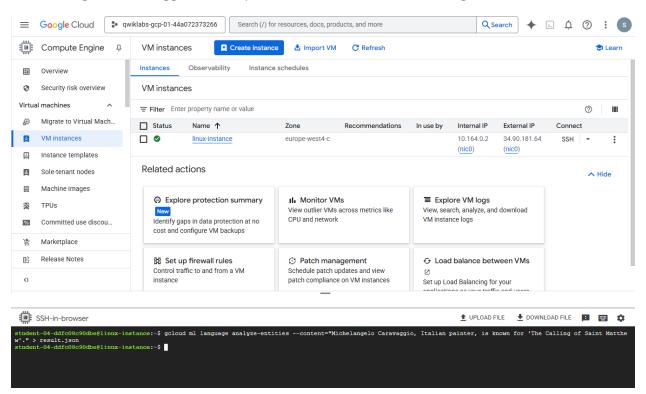
### Purpose:

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

```
**SSH-in-browser**

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```

# 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.