Application 1: Detect labels, faces, and landmarks in images with the cloud vision api

Label -Detection:

{

"requests": [

{

"image": {

"source": {

"gcsImageUri": "gs://my-bucket-name/donuts.png"

}

},

"features": [

{

"type": "LABEL\_DETECTION",

"maxResults": 10

}

]

}

]

}

Curl Command:

curl -s -X POST -H "Content-Type: application/json" --data-binary @request.json [https://vision.googleapis.com/v1/images:annotate?key=${API\_KEY}](https://vision.googleapis.com/v1/images:annotate?key=$%7bAPI_KEY%7d)

Web-Detection:

{

"requests": [

{

"image": {

"source": {

"gcsImageUri": "gs://my-bucket-name/donuts.png"

}

},

"features": [

{

"type": "WEB\_DETECTION",

"maxResults": 10

}

]

}

]

}

curl -s -X POST -H "Content-Type: application/json" --data-binary @request.json [https://vision.googleapis.com/v1/images:annotate?key=${API\_KEY}](https://vision.googleapis.com/v1/images:annotate?key=$%7bAPI_KEY%7d)

Application 2:Vertex AI api:

Task 1. Sample text prompts

You will perform the tasks in this lab using curl within Cloud Shell.

In the Google Cloud Console, open Cloud Shell.

Summarization prompt example

Run the following curl command in Cloud Shell:

MODEL\_ID="text-bison"

PROJECT\_ID=$DEVSHELL\_PROJECT\_ID

curl \

-X POST \

-H "Authorization: Bearer $(gcloud auth print-access-token)" \

-H "Content-Type: application/json" \

https://us-central1-aiplatform.googleapis.com/v1/projects/${PROJECT\_ID}/locations/us-central1/publishers/google/models/${MODEL\_ID}:predict -d \

$'{

"instances": [

{ "prompt": "Provide a summary with about two sentences for the following article:

The efficient-market hypothesis (EMH) is a hypothesis in financial \

economics that states that asset prices reflect all available \

information. A direct implication is that it is impossible to \

\\"beat the market\\" consistently on a risk-adjusted basis since market \

prices should only react to new information. Because the EMH is \

formulated in terms of risk adjustment, it only makes testable \

predictions when coupled with a particular model of risk. As a \

result, research in financial economics since at least the 1990s has \

focused on market anomalies, that is, deviations from specific \

models of risk. The idea that financial market returns are difficult \

to predict goes back to Bachelier, Mandelbrot, and Samuelson, but \

is closely associated with Eugene Fama, in part due to his \

influential 1970 review of the theoretical and empirical research. \

The EMH provides the basic logic for modern risk-based theories of \

asset prices, and frameworks such as consumption-based asset pricing \

and intermediary asset pricing can be thought of as the combination \

of a model of risk with the EMH. Many decades of empirical research \

on return predictability has found mixed evidence. Research in the \

1950s and 1960s often found a lack of predictability (e.g. Ball and \

Brown 1968; Fama, Fisher, Jensen, and Roll 1969), yet the \

1980s-2000s saw an explosion of discovered return predictors (e.g. \

Rosenberg, Reid, and Lanstein 1985; Campbell and Shiller 1988; \

Jegadeesh and Titman 1993). Since the 2010s, studies have often \

found that return predictability has become more elusive, as \

predictability fails to work out-of-sample (Goyal and Welch 2008), \

or has been weakened by advances in trading technology and investor \

learning (Chordia, Subrahmanyam, and Tong 2014; McLean and Pontiff \

2016; Martineau 2021).

Summary:

"}

],

"parameters": {

"temperature": 0.2,

"maxOutputTokens": 256,

"topK": 40,

"topP": 0.95

}

}'

Copied!

You should see a response that summarizes the content using the parameters defined earlier in this lab. The maxOutputTokens parameter can be modified to shorten or lengthen the content summary that the PaLM API generates for the reply.

Ideation prompt example

The Vertex AI PaLM API can be used for ideation in addition to summarization.

Run the following curl command in Cloud Shell to review the output that the PaLM API responds with.

MODEL\_ID="text-bison"

PROJECT\_ID=$DEVSHELL\_PROJECT\_ID

curl \

-X POST \

-H "Authorization: Bearer $(gcloud auth print-access-token)" \

-H "Content-Type: application/json" \

https://us-central1-aiplatform.googleapis.com/v1/projects/${PROJECT\_ID}/locations/us-central1/publishers/google/models/${MODEL\_ID}:predict -d \

$'{

"instances": [

{ "prompt": "Give me ten interview questions for the role of program manager."}

],

"parameters": {

"temperature": 0.2,

"maxOutputTokens": 1024,

"topK": 40,

"topP": 0.8

}

}'

Copied!

You should see a response from the API call that provides ten questions related to the role of program manager.

Run the following commands to save response values of the API to a text file:

MODEL\_ID="text-bison"

PROJECT\_ID=$DEVSHELL\_PROJECT\_ID

curl \

-X POST \

-H "Authorization: Bearer $(gcloud auth print-access-token)" \

-H "Content-Type: application/json" \

https://us-central1-aiplatform.googleapis.com/v1/projects/${PROJECT\_ID}/locations/us-central1/publishers/google/models/${MODEL\_ID}:predict -d \

$'{

"instances": [

{ "prompt": "Provide a summary with about two sentences for the following article:

The efficient-market hypothesis (EMH) is a hypothesis in financial \

economics that states that asset prices reflect all available \

information. A direct implication is that it is impossible to \

\\"beat the market\\" consistently on a risk-adjusted basis since market \

prices should only react to new information. Because the EMH is \

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predictions when coupled with a particular model of risk. As a \

result, research in financial economics since at least the 1990s has \

focused on market anomalies, that is, deviations from specific \

models of risk. The idea that financial market returns are difficult \

to predict goes back to Bachelier, Mandelbrot, and Samuelson, but \

is closely associated with Eugene Fama, in part due to his \

influential 1970 review of the theoretical and empirical research. \

The EMH provides the basic logic for modern risk-based theories of \

asset prices, and frameworks such as consumption-based asset pricing \

and intermediary asset pricing can be thought of as the combination \

of a model of risk with the EMH. Many decades of empirical research \

on return predictability has found mixed evidence. Research in the \

1950s and 1960s often found a lack of predictability (e.g. Ball and \

Brown 1968; Fama, Fisher, Jensen, and Roll 1969), yet the \

1980s-2000s saw an explosion of discovered return predictors (e.g. \

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predictability fails to work out-of-sample (Goyal and Welch 2008), \

or has been weakened by advances in trading technology and investor \

learning (Chordia, Subrahmanyam, and Tong 2014; McLean and Pontiff \

2016; Martineau 2021).

Summary:

"}

],

"parameters": {

"temperature": 0.2,

"maxOutputTokens": 256,

"topK": 40,

"topP": 0.95

}

}' > summarization\_prompt\_example.txt

Copied!

MODEL\_ID="text-bison"

PROJECT\_ID=$DEVSHELL\_PROJECT\_ID

curl \

-X POST \

-H "Authorization: Bearer $(gcloud auth print-access-token)" \

-H "Content-Type: application/json" \

https://us-central1-aiplatform.googleapis.com/v1/projects/${PROJECT\_ID}/locations/us-central1/publishers/google/models/${MODEL\_ID}:predict -d \

$'{

"instances": [

{ "prompt": "Give me ten interview questions for the role of program manager."}

],

"parameters": {

"temperature": 0.2,

"maxOutputTokens": 1024,

"topK": 40,

"topP": 0.8

}

}' > ideation\_prompt\_example.txt

Copied!

Run the following command to copy these file to a pre-created Cloud Storage bucket to track your progress:

export PROJECT\_ID=$(gcloud config get-value project)

gsutil cp \*.txt gs://$PROJECT\_ID