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Note: Using this API in a media file sent to the Firebase Machine Learning ☑ or Google ML Kit ☑ which provide native Android and iOS SDKs for using Cloud Vision services, text will be sent as an image (or PDF). Text and document detection using custom ML models.

The Vision API now supports offline **asynchronous batch image annotation** for all features. This asynchronous request supports up to 2000 image files and returns responses JSON files that are stored in your Cloud Storage bucket. For more information about this feature, refer to Offline batch image annotation.

Pricing for document text detection is at the `DOCUMENT_TEXT_DETECTION` rate. Please see the Pricing page for details.

Handwriting detection with Optical Character Recognition (OCR)

Vision API can detect and extract text from images.

- `DOCUMENT_TEXT_DETECTION` performs text recognition on dense text. For OCR, the response is **optimized for dense text and documents**. The JSON includes page, block, paragraph, word, and break information.

Use specific use of `DOCUMENT_TEXT_DETECTION` to detect handwriting in an image.

Document text detection request

Set up your GCP project and authorization

If you have not created a Google Cloud Platform (GCP) project and service account credentials, do so now. Expand this section for instructions.

Detect document text in a local image

The Vision API can perform feature detection on a local image file by sending the contents of the image file as a base64 encoded string in the body of your request.

REST & CMD LINE | Go | Java | Node.js | Python | Additional languages

Before using any of the request data below, make the following replacements:

- `base64-encoded-image`: The base64-encoded JSON string of your binary image data. This string should look similar to the following string:
  - `/9j/4AAQSkZJRgABAQAAAQABAAD/2wCEAAoHCAkJCAoJCQkNCwoMDxkQDw4ODx4WFxIZJCAmJiMgIyIo`
  - Visit the base64 encode topic for more information.

HTTP method and URL:

```
POST https://vision.googleapis.com/v1/images:annotate
```

Request JSON body:

```
{
  "requests": [
    {
      "image": {
        "content": "base64-encoded-image-p"
      },
      "features": [
        {
          "type": "DOCUMENT_TEXT_DETECTION"
        }
      ]
    }
  ]
}
```

To send your request, choose one of these options:

curl | PowerShell

Note: Ensure you have set the `GOOGLE_APPLICATION_CREDENTIALS` environment variable in the path for your service account private key file.

Save the request body in a file called `request.json`, and execute the following command:

```
curl -X POST \
-H "Authorization: Bearer "$(gcloud auth application-default print-access-token) \
-H "Content-Type: application/json; charset=utf-8" \
-d @request.json \
https://vision.googleapis.com/v1/images:annotate
```

If the request is successful, the server returns a 200 HTTP status code and the response in JSON format.

Note: Zero coordinates returned. When the API detects a coordinate (`"x":0`) value of 0, **that coordinate is omitted in the JSON response**. This is consistent with a bounding poly around the entire image would be `{"x":0,"y":0}`, or a bounding box of **`{"x":0,"y":0,"w":w,"h":h}`** for an image that is `"w"` by `"h"` pixels. For more information, see the API Reference documentation.

Response

Detect document text in a remote image

For your convenience, the Vision API can perform feature detection directly on an image file located in Google Cloud Storage or on the Web without the need to send the contents of the image file in the body of your request.

Caution: When fetching images from HTTP/HTTPS URLs, Google cannot guarantee that the request will be completed. Your request may fail if the specified host denies the request (for example, due to request throttling or IP blocking), or if Google throttles requests to the site for abuse prevention. **You should not depend on externally hosted images for production applications.**

REST & CMD LINE | Go | Java | Node.js | Python | Additional languages

Before using any of the request data below, make the following replacements:

- `gcs-uri`: Cloud Storage URI for the image you want to perform Optical Character Recognition. You must at least have read privileges to the file. Example:
  - `gs://cloud-ml-handwriting-ocr-bucket/handwriting_image.png`

HTTP method and URL:

```
POST https://vision.googleapis.com/v1/images:annotate
```

Request JSON body:

```
{
  "requests": [
    {
      "image": {
        "source": {
          "gcs_image_uri": "gs://cloud-ml-handwriting-ocr-bucket/handwriting_image.png"
        }
      },
      "features": [
        {
          "type": "DOCUMENT_TEXT_DETECTION"
        }
      ]
    }
  ]
}
```

To send your request, choose one of these options:

curl | PowerShell

Note: Ensure you have set the `GOOGLE_APPLICATION_CREDENTIALS` environment variable in the path for your service account private key file.

Save the request body in a file called `request.json`, and execute the following command:

```
curl -X POST \
-H "Authorization: Bearer "$(gcloud auth application-default print-access-token) \
-H "Content-Type: application/json; charset=utf-8" \
-d @request.json \
https://vision.googleapis.com/v1/images:annotate
```

If the request is successful, the server returns a 200 HTTP status code and the response in JSON format.

Note: Zero coordinates returned. When the API detects a coordinate (`"x":0`) value of 0, **that coordinate is omitted in the JSON response**. This is consistent with a bounding poly around the entire image would be `{"x":0,"y":0}`, or a bounding box of **`{"x":0,"y":0,"w":w,"h":h}`** for an image that is `"w"` by `"h"` pixels. For more information, see the API Reference documentation.

Response

Specify the language (optional)

Both types of OCR requests support an more `languagehints` that specify the language of any text in the image. However, in most cases, when text is detected in a predominantly English image, Vision API produces good results. Languages based on the Latin alphabet, setting `languagehints` is not needed. In rare cases, when the language of the text in the image is known, setting a hint helps get better results (although it can be a significant freebiend if the text is similar). Ingor Japanese and Korean are one of or more of the specified languages is not one of the supported languages.

If you choose to provide a language hint, modify the body of your request `request.json` file to provide the string of one of the supported languages in the `languagehints` field as shown below:

```
{
  "requests": [
    {
      "image": {
        "source": {
          "gcs_image_uri": "gs://cloud-ml-handwriting-ocr-bucket/handwriting_image.png"
        }
      },
      "features": [
        {
          "type": "DOCUMENT_TEXT_DETECTION"
        }
      ],
      "imageContext": {
        "languageHints": ["en-t-i0-handwrit"]
      }
    }
  ]
}
```

How do language hints work?

The `languagehints` format follows the BCP47 language code formatting guidelines. The BCP47 specified format is as follows:

`language[-script][-region]` ("en" | "en-US" | "zh" | "zh-Hant-TW")

For example, the language hint `"en-t-i0-handwrit"` specifies the English language (`en`), transliteration extension (`t`), input method engine transliteration extension code (`i0`), and handwriting transliteration code (`handwrit`). This insights says the language is "English transliterated from Handwriting". You do not need to specify a script code (`-script`) because it's implied by the `"en"` language.

Multi-regional support

This functionality currently only applies to the OCR features types `TEXT_DETECTION` or `DOCUMENT_TEXT_DETECTION`.

You can now specify customer-level data storage and OCR processing. The following regions are currently supported:

- `us`: USA country only
- `eu`: The European Union

Locations

Cloud Vision offers you some control over where the resources for your project are stored and processed. In particular, you can configure Cloud Vision to store and process your data only in the European Union.

By default Cloud Vision stores and processes resources in a **Global** location, which means that Cloud Vision doesn't guarantee that your resources will remain within a particular location or region. If you choose the **European Union** location, Cloud Vision stores your data and process it only in the European Union. You and your users can access the data from any location.

Setting the location using the API

The Vision API supports a global API endpoint (`vision.googleapis.com`) as well as two region-based endpoints: a European Union endpoint (`eu-vision.googleapis.com`) and United States endpoint (`us-vision.googleapis.com`). Use these endpoints for region-specific processing. For example, to store and process your data in the European Union only use the URL `eu-vision.googleapis.com` in your REST API calls:

- `https://eu-vision.googleapis.com/v1/images:annotate`
- `https://eu-vision.googleapis.com/v1/projects/myproject/locations/eu:asyncBatchAnnotate`
- `https://eu-vision.googleapis.com/v1/files:asyncBatchAnnotate`
- `https://eu-vision.googleapis.com/v1/files:asyncBatchAnnotate`

To store and process your data in the United States only, use the US endpoint (`us-vision.googleapis.com`) with the methods listed above.

Setting the location using the client libraries

The Vision API client libraries accessing the global API endpoint (`vision.googleapis.com`) by default. To store and process your data in the European Union only, you need to explicitly set the endpoint (`eu-vision.googleapis.com`). The code samples below show how to configure this setting.

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Before using any of the request data below, make the following replacements:

- `gcs-uri`: Cloud Storage URI for the image you want to perform Optical Character Recognition. You must at least have read privileges to the file. Example:
  - `gs://cloud-ml-handwriting-ocr-bucket/handwriting_image.png`

HTTP method and URL:

```
POST https://eu-vision.googleapis.com/v1/images:annotate
```

Request JSON body:

```
{
  "requests": [
    {
      "image": {
        "source": {
          "gcs_image_uri": "gs://cloud-ml-handwriting-ocr-bucket/handwriting_image.png"
        }
      },
      "features": [
        {
          "type": "DOCUMENT_TEXT_DETECTION"
        }
      ]
    }
  ]
}
```

To send your request, choose one of these options:

curl | PowerShell

Note: Ensure you have set the `GOOGLE_APPLICATION_CREDENTIALS` environment variable in the path for your service account private key file.

Save the request body in a file called `request.json`, and execute the following command:

```
curl -X POST \
-H "Authorization: Bearer "$(gcloud auth application-default print-access-token) \
-H "Content-Type: application/json; charset=utf-8" \
-d @request.json \
https://eu-vision.googleapis.com/v1/images:annotate
```

If the request is successful, the server returns a 200 HTTP status code and the response in JSON format.

Note: Zero coordinates returned. When the API detects a coordinate (`"x":0`) value of 0, **that coordinate is omitted in the JSON response**. This is consistent with a bounding poly around the entire image would be `{"x":0,"y":0}`, or a bounding box of **`{"x":0,"y":0,"w":w,"h":h}`** for an image that is `"w"` by `"h"` pixels. For more information, see the API Reference documentation.

Response

Try it

Try text detection and document text detection below. You can use the image specified already (`gs://cloud-ml-handwriting-ocr-bucket/handwriting_image.png`) by clicking **Execute**, or you can specify your own image in its place.

Request body:

```
{
  "requests": [
    {
      "image": {
        "source": {
          "gcs_image_uri": "gs://cloud-ml-handwriting-ocr-bucket/handwriting_image.png"
        }
      },
      "features": [
        {
          "type": "DOCUMENT_TEXT_DETECTION"
        }
      ]
    }
  ]
}
```

Try this API

Call this method on live data to see the API request and response. Need help with the API Explorer? Check the support page.

Request parameters

No method-level parameters.

Show standard parameters

Request body

```
{
  "requests": [
    {
      "image": {
        "source": {
          "gcs_image_uri": "gs://cloud-ml-handwriting-ocr-bucket/handwriting_image.png"
        }
      },
      "features": [
        {
          "type": "DOCUMENT_TEXT_DETECTION"
        }
      ]
    }
  ]
}
```

For suggestions, press control+space or click one of the blue "add" combos.

Credentials

Google OAuth 2.0

OAuth 2.0 provides authenticated access to an API. More scopes

API Key

An API key is a unique string that lets you access an API.

EXECUTE

By clicking above, I agree that my use of the API Explorer is governed by the Terms and Privacy Policy.

Rate and review

Send feedback

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Last updated 2021-06-09 UTC.