Next '17

Extended

Detect Objects, Faces, and Landmarks in Images with the Cloud Vision API

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STARTUP HACKER

Highlights

Overview

What is Google Cloud Vision?

Features

Objects detection

Sentimental analysis

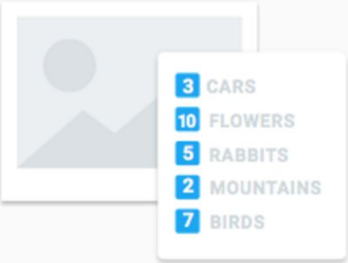
How-to

Curl usage, libraries, webapp

What is Google Cloud Vision?

Google Cloud Vision API enables developers to **understand the content of an image** by encapsulating **powerful machine learning models** in an easy to use REST API. It quickly **classifies images** into thousands of categories (e.g., "sailboat", "lion", "Eiffel Tower"), **detects individual objects and faces within images**, and finds and reads printed words contained within images.

Features

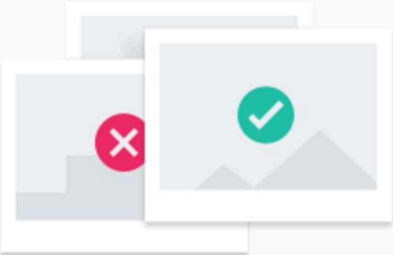


Insight From Your Images

Easily **detect broad sets of objects** in your images, from flowers, animals, or transportation to thousands of other object categories commonly found within images. **Vision API improves over time** as new concepts are introduced and accuracy is improved.

Detect Inappropriate Content

Powered by Google SafeSearch, **easily moderate content** from your crowd sourced images. Vision API enables you to detect different types of inappropriate content from adult to violent content.



Features (contd)

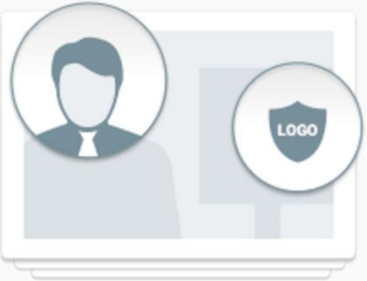


Image Sentiment Analysis

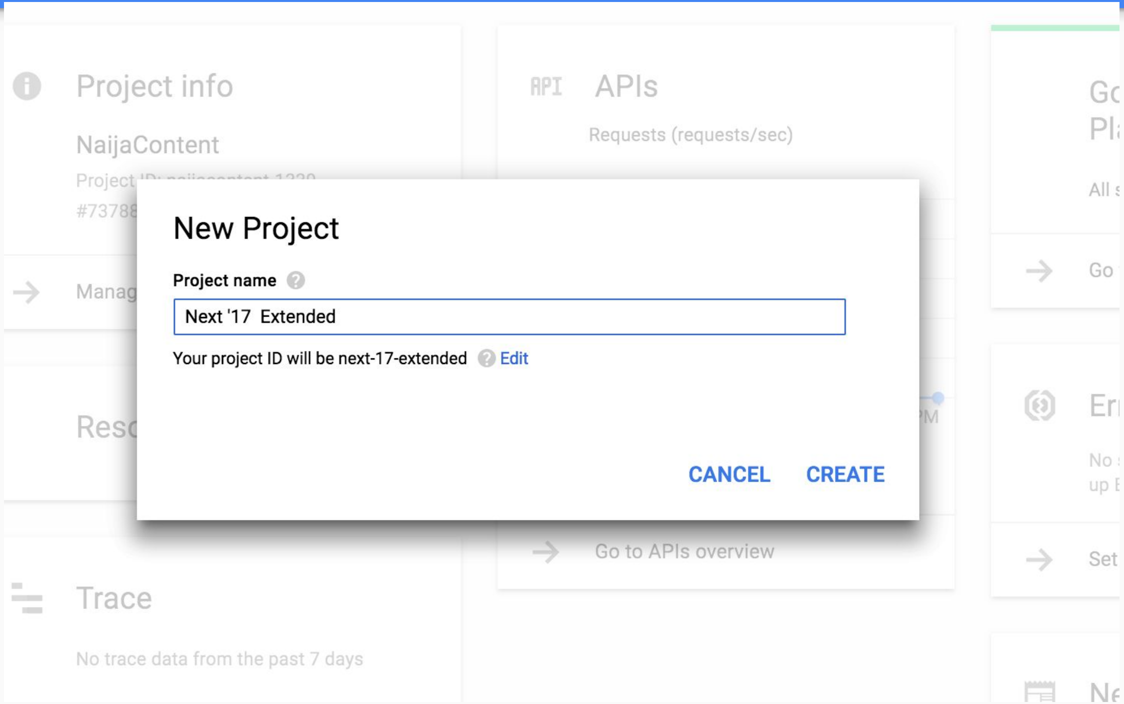
Vision API can **analyze emotional facial attributes** of people in your images, like joy, sorrow, and anger. Combine this with object detection and product logo detection, so you can assess how people feel about your logo.

Extract Text

Optical Character Recognition (OCR) enables you to **detect text** within your images, along with **automatic language identification**. Vision API supports a broad set of languages.

HOW-TO

1. CREATE A NEW PROJECT



New Project

Project name

Next '17 Extended

Your project ID will be next-17-extended Edit

1. Create a new project in the GC console
2. Enable the Cloud Vision API
3. Create a new credential (make sure you choose the API key option)
4. Copy your API key somewhere safe

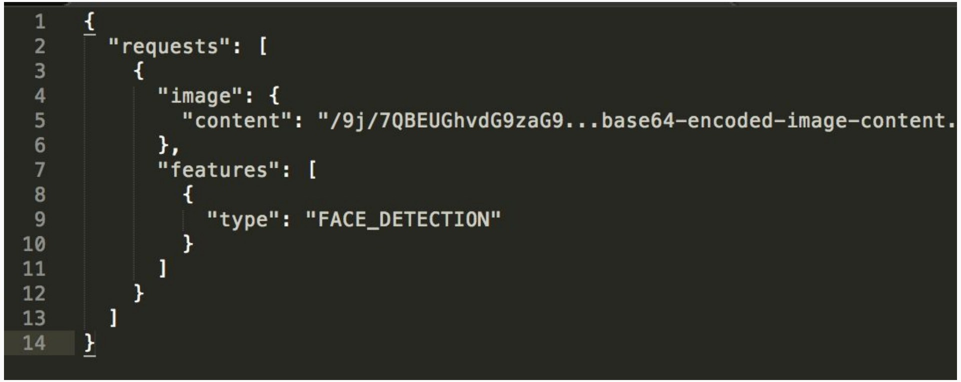
HOW-TO

1. CURL USAGE

1. Create a json file e.g vision.json

2. curl -s -X POST -H "Content-Type: application/json" --data-binary @vision.json https://vision.googleapis.com/v1/images:annotate?key={your API key}

Sample json request body

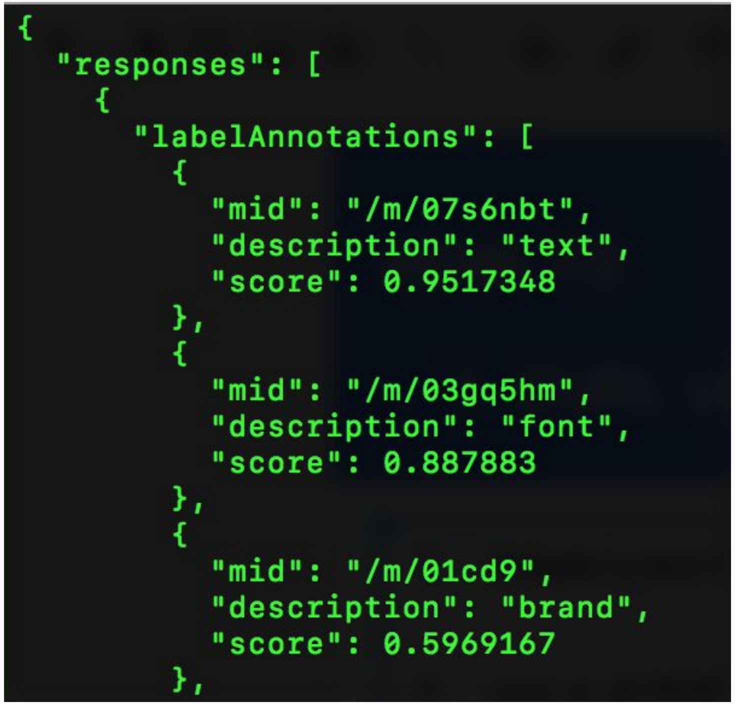


```
{
  "requests": [
    {
      "image": {
        "content": "/9j/7QBEUGhvdG9zaG9...base64-encoded-image-content.
      },
      "features": [
        {
          "type": "FACE_DETECTION"
        }
      ]
    }
  ]
}
```

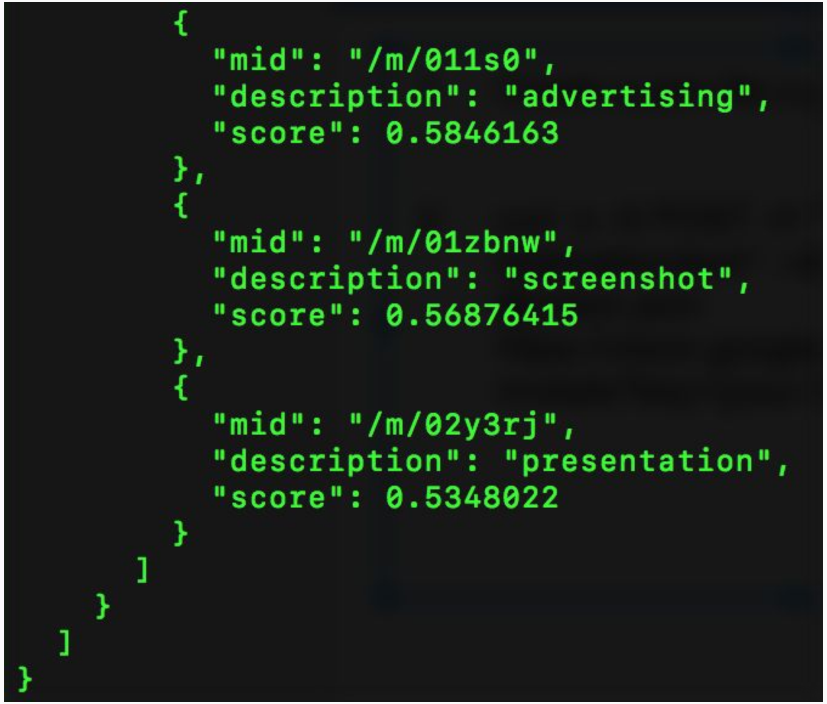
HOW-TO

1. CURL USAGE (contd)

*Sample json response body

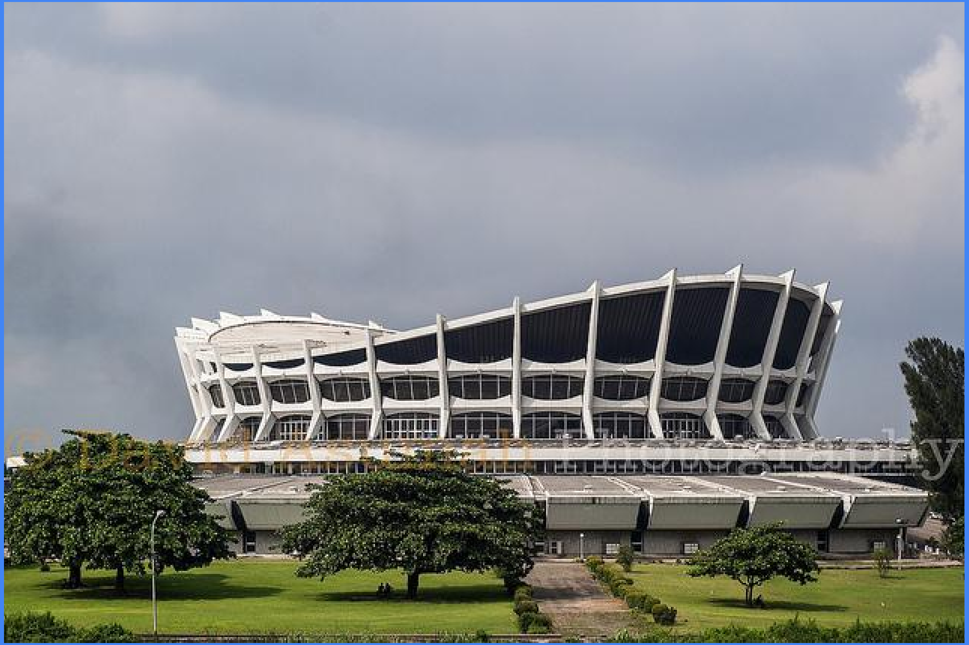


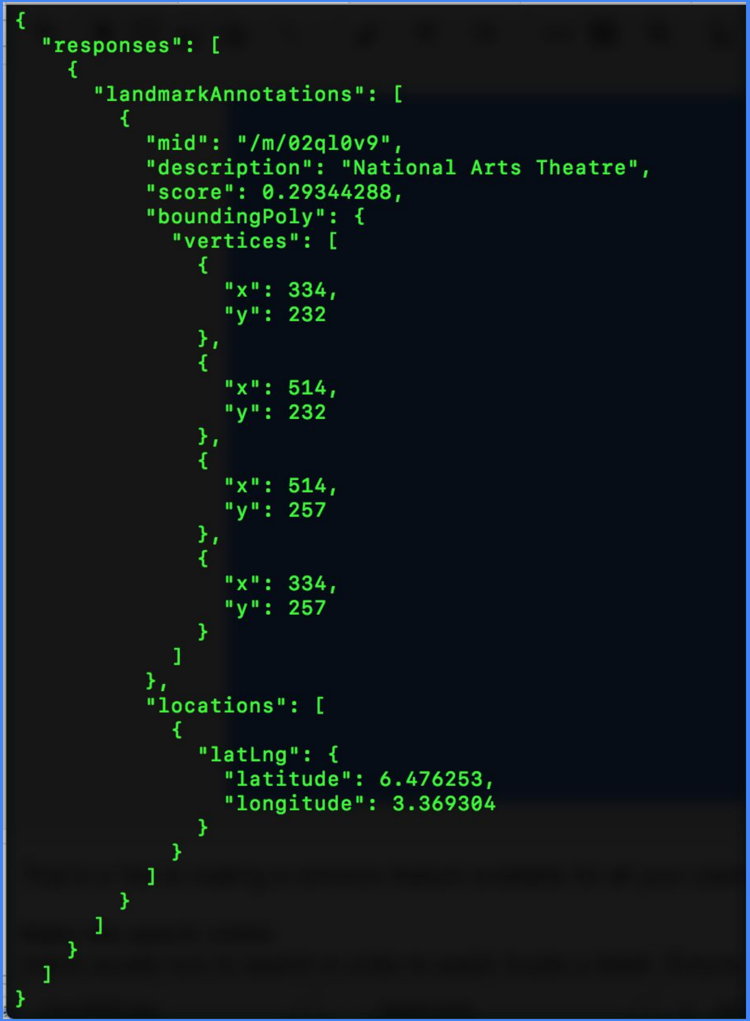
```
{
  "responses": [
    {
      "labelAnnotations": [
        {
          "mid": "/m/07s6nbt",
          "description": "text",
          "score": 0.9517348
        },
        {
          "mid": "/m/03gq5hm",
          "description": "font",
          "score": 0.887883
        },
        {
          "mid": "/m/01cd9",
          "description": "brand",
          "score": 0.5969167
        },
```



```
        {
          "mid": "/m/011s0",
          "description": "advertising",
          "score": 0.5846163
        },
        {
          "mid": "/m/01zbnw",
          "description": "screenshot",
          "score": 0.56876415
        },
        {
          "mid": "/m/02y3rj",
          "description": "presentation",
          "score": 0.5348022
        }
      ]
    }
  ]
}
```

Landmark detection example





```
{
  "responses": [
    {
      "landmarkAnnotations": [
        {
          "mid": "/m/02ql0v9",
          "description": "National Arts Theatre",
          "score": 0.29344288,
          "boundingPoly": {
            "vertices": [
              {
                "x": 334,
                "y": 232
              },
              {
                "x": 514,
                "y": 232
              },
              {
                "x": 514,
                "y": 257
              },
              {
                "x": 334,
                "y": 257
              }
            ]
          },
          "locations": [
            {
              "latLng": {
                "latitude": 6.476253,
                "longitude": 3.369304
              }
            }
          ]
        }
      ]
    }
  ]
}
```

Pretty awesome, isn't it?

HOW-TO

1. LIBRARIES

Python - `pip install --upgrade google-cloud-vision`

GO - `go get -u cloud.google.com/go/vision`

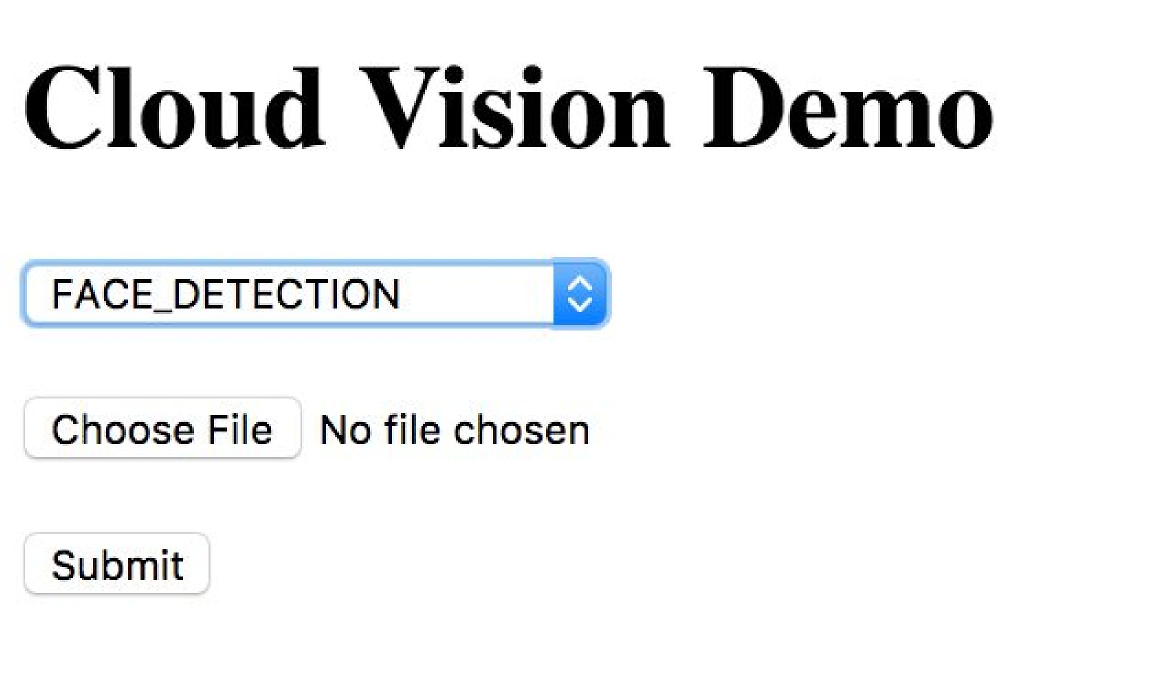
Nodejs - `npm install --save @google-cloud/vision`

PHP - `composer require google/cloud`

Ruby - `gem install google-cloud-vision`

DEMO WEBAPP

https://github.com/olucurious/Next-17-Extended



Cloud Vision Demo

FACE_DETECTION

No file chosen

THANK YOU!

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