Azure Cognitive Services

Microsoft Cognitive Services

Microsoft Azure

Use AI to solve business problems

Vision

Image-processing algorithms to smartly identify, caption and moderate your pictures.

Speech

Convert spoken audio into text, use voice for verification, or add speaker recognition to your app.

Knowledge

Map complex information and data in order to solve tasks such as intelligent recommendations and semantic search.

Search

Add Bing Search APIs to your apps and harness the ability to comb billions of webpages, images, videos, and news with a single API call.

Language

Allow your apps to process natural language with pre-built scripts, evaluate sentiment and learn how to recognize what users want.

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Vision

Computer Vision API
Distill actionable information from images

Face API
Detect, identify, analyze, organize, and tag faces in photos

Emotion API
Personalize experiences with emotion recognition

Video API
Analyze, edit, and process videos with your app

Language

Bing Spell Check API
Detect and correct spelling mistakes within your app

Web Language Model API
Leverage the power of language models trained on web-scale data

Linguistic Analysis API
Easily parse complex text with language analysis

Language Understanding Intelligent Service
Teach your apps to understand commands from your users

Text Analytics API
Detect sentiment, key phrases, topics, and language from your text

Speech

Bing Speech API
Convert speech to text and back again, and understand its intent

Speaker Recognition API
Give your apps the ability to know who's talking

Custom Recognition Intelligent Service
Fine-tune speech recognition for anyone, anywhere

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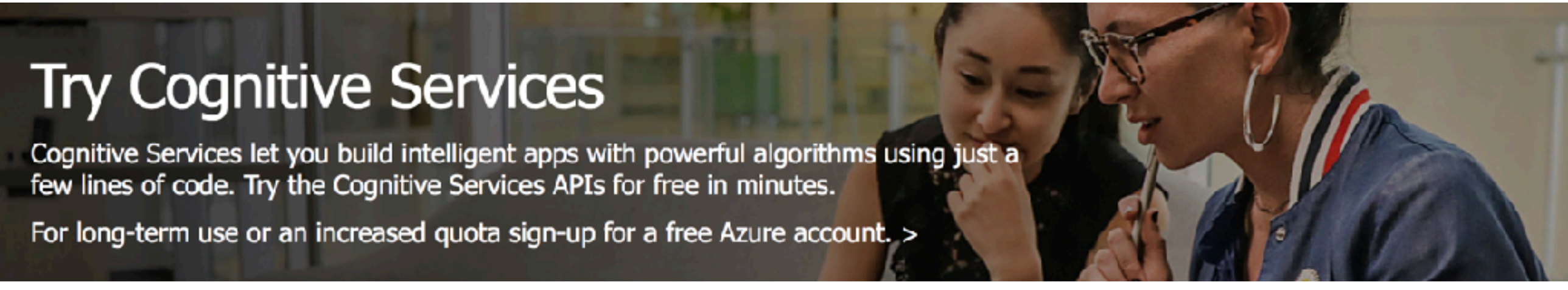

Vision | Speech | Language | Knowledge | Search — Log in

Computer Vision API	Distill actionable information from images 5,000 transactions, 20 per minute.	Get API Key
Emotion API PREVIEW	Personalize user experiences with emotion recognition 30,000 transactions, 20 per minute.	Get API Key
Face API	Detect, identify, analyze, organize, and tag faces in photos 30,000 transactions, 20 per minute.	Get API Key

https://azure.microsoft.com/en-us/try/cognitive-services/?api=face-api

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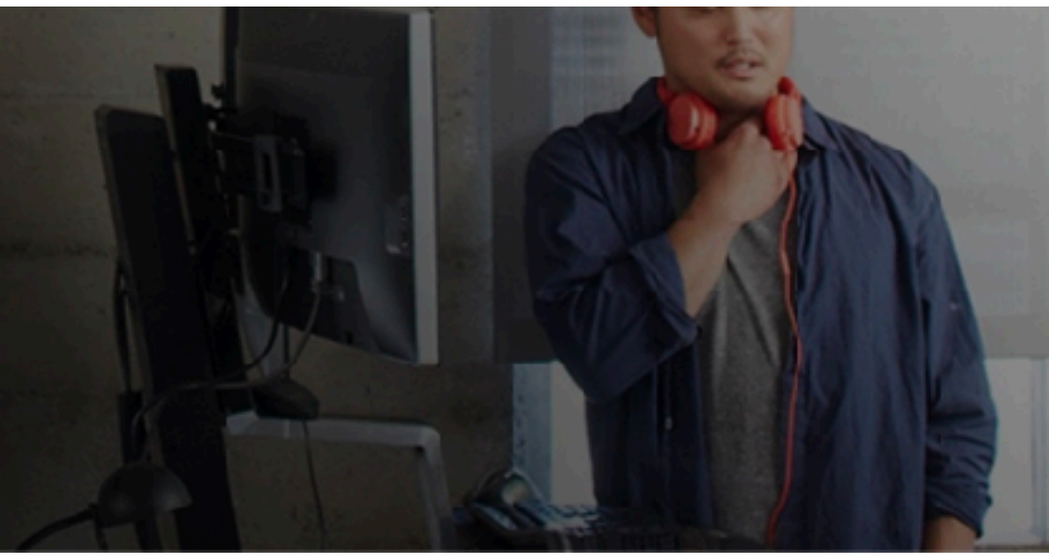
Computer Vision API



Extract rich information from images to categorize and process visual data – and machine-assisted moderation of images to help curate your services.

FEATURE NAME:	VALUE
Description	{ "tags": ["outdoor", "woman", "clothing", "beach", "person", "surfing", "water", "beautiful", "standing", "board", "lady", "holding", "suit", "white", "female", "young", "posing", "carrying", "girl", "top", "black", "wearing", "walking", "sand", "frisbee", "playing", "court", "wave", "blue"], "captions": [{ "text": "a woman standing on a beach posing for the camera", "confidence": 0.956892669 }] }
Tags	[{ "name": "sky", "confidence": 0.9999175 }, { "name": "outdoor", "confidence": 0.9947078 }, { "name": "woman", "confidence": 0.9892105 }, { "name": "clothing", "confidence": 0.9290029 }, { "name": "beach", "confidence": 0.925322056 }, { "name": "person", "confidence": 0.9188145 }, { "name": "beautiful", "confidence": 0.655149341 }, { "name": "swimsuit", "confidence": 0.647359967 }, { "name": "female", "confidence": 0.301760763 }]

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Computer Vision API

Extract rich information from images to categorize and process visual data – and machine-assisted moderation of images to help curate your services.

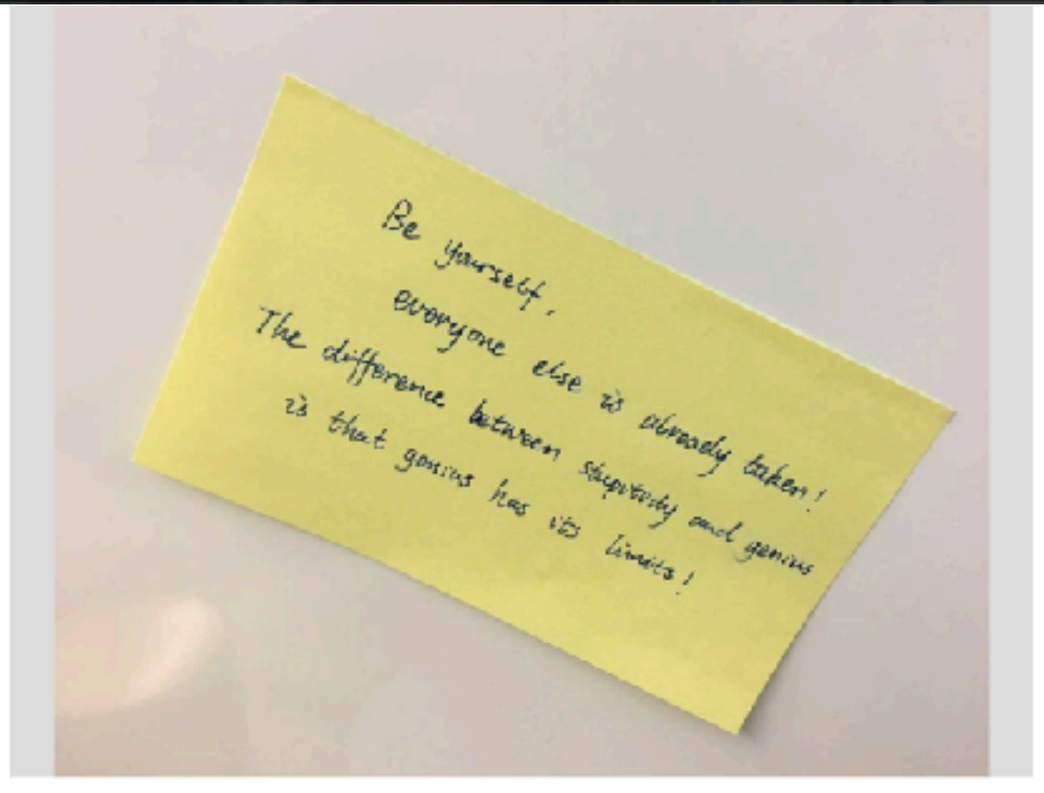

Image URL | Submit | Browse

Preview | JSON

Be yourself

everyone else is already taken

The difference between stupitoday and genius

is that genius has its limits

https://azure.microsoft.com/en-us/services/cognitive-services/computer-vision/

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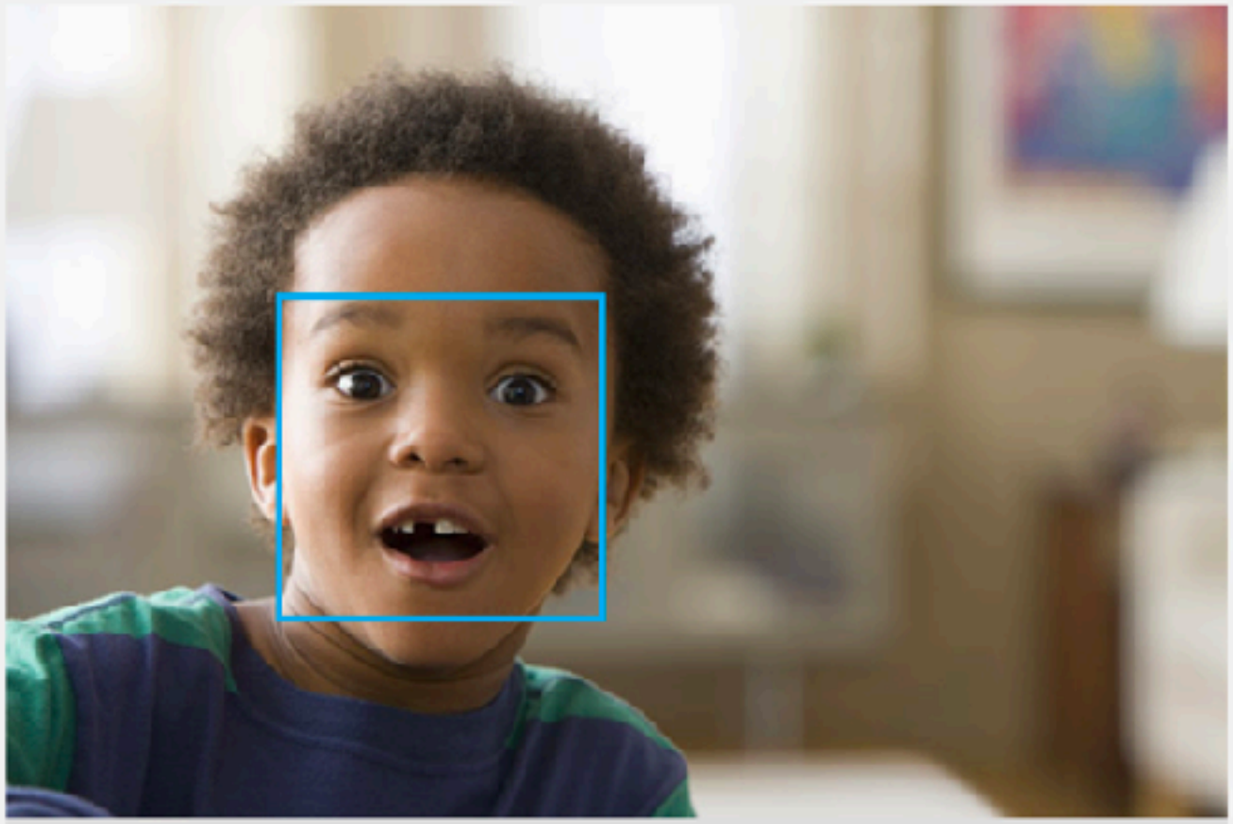
Emotion API PREVIEW

Analyze faces to detect a range of feelings and personalize your app's responses.



```
Detection result:
1 faces detected

JSON:
[
  {
    "faceRectangle": {
      "top": 141,
      "left": 130,
      "width": 162,
      "height": 162
    },
    "scores": {
      "anger": 9.29041E-06,
      "contempt": 0.000118981574,
      "disgust": 3.15619363E-05,
      "fear": 0.000589638,
      "happiness": 0.06630674,
      "neutral": 0.00555004273,
      "sadness": 7.44669524E-05,
      "surprise": 0.9273863
    }
  }
```

https://azure.microsoft.com/en-us/services/cognitive-services/emotion/

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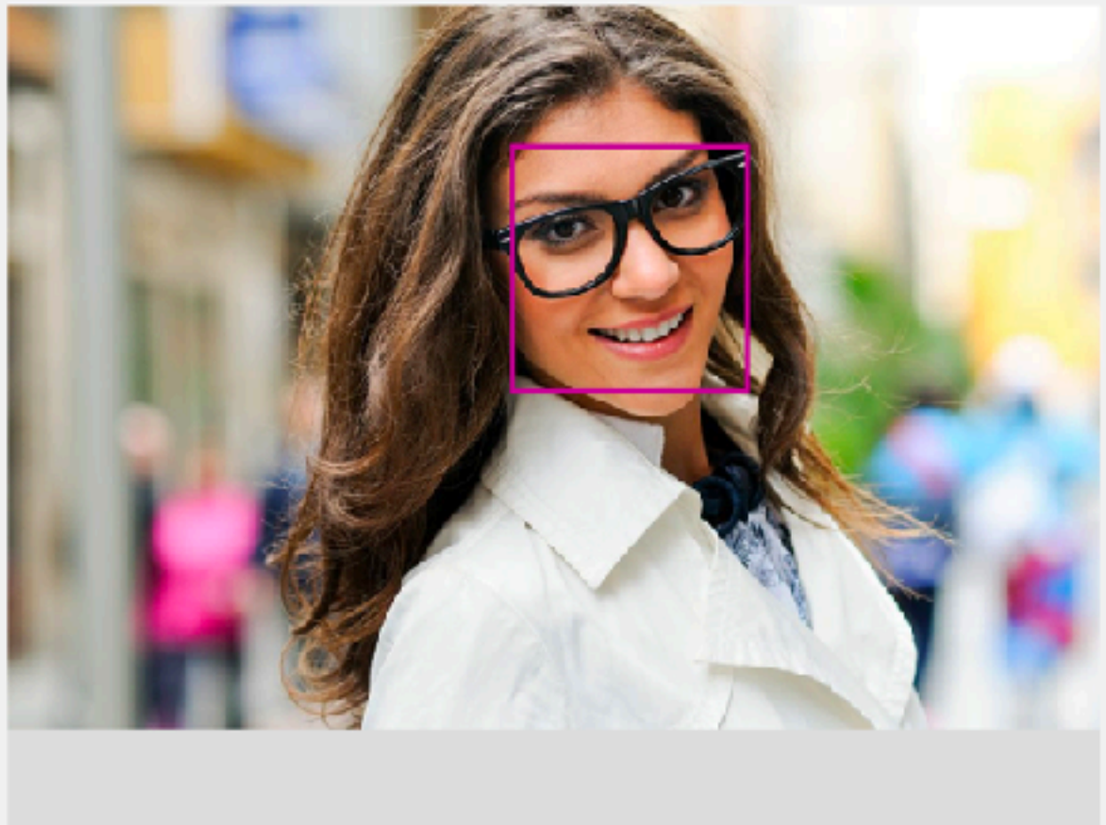
Face API

- ✔ Detect human faces and compare similar ones
- ✔ Organize images into groups based on similarity
- ✔ Identify previously tagged people in images




```
Detection result:
JSON:
 [
  {
    "faceId": "9a6d3b06-8404-4ebf-b715-71c8c285b4c8",
    "faceRectangle": {
      "top": 128,
      "left": 459,
      "width": 224,
      "height": 224
    },
    "faceAttributes": {
      "hair": {
        "bald": 0.0,
        "invisible": false,
        "hairColor": [
          {
            "color": "brown",
            "confidence": 1.0
          },
          {
            "color": "blond",
            "confidence": 0.69
```


https://azure.microsoft.com/en-us/services/cognitive-services/face/

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Face API Documentation

The cloud-based Face API provides developers with access to advanced face algorithms. Microsoft Face algorithms enable face attribute detection and face recognition. Learn how to analyze content in different ways with our quickstarts, tutorials, and samples.

5-Minute Quickstarts

Detect and identify faces using:

C# cURL Java JavaScript PHP Python Ruby

Step-by-Step Tutorials

Develop applications using the Face API:

1. C# Tutorial
2. Java for Android Tutorial
3. Python Tutorial

https://docs.microsoft.com/en-us/azure/cognitive-services/face/

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Example Code

```python
import requests, urllib

class FaceAPI :

    def __init__(self):

        self.headers_json = {
            # Request headers
            'Content-Type':"application/json",
            'cache-control':"no-cache",
            # NOTE: Replace the "Ocp-Apim-Subscription-Key" value with a valid subscription key.
            'Ocp-Apim-Subscription-Key': 'b[redacted]1b8b0',
        }

        self.ParamsDetect = urllib.urlencode({
            # Request parameters
            'returnFaceId': 'true',
            'returnFaceLandmarks': 'false',
            'returnFaceAttributes': 'age,gender',
        })

    def face_detect(self, img_data):
        headers = self.headers_json
        params = self.ParamsDetect
        try:

            url = 'https://southeastasia.api.cognitive.microsoft.com/face/v1.0/detect?%s' % params
            response = requests.post(url, headers=headers, data=img_data)
            return response

        except Exception as e:
            print("[Errno {0}] {1}".format(e.errno, e.strerror))

def main():
    body = '{"url":"https://s.isanook.com/ca/0/ud/277/1386521/21371968_16942276906010S6_830.jpg"}'
    faceDetector = FaceAPI()
    response = faceDetector.face_detect(body)
    print(response.content)
```