Microsoft Cognitive Services

democratizing intelligence

Microsoft Cognitive Services

Give your apps a human side

Cognitive Services API Collection

Vision

Computer Vision | Emotion | Face | Video

Speech

Computer Recognition | Speaker Recognition Speech

Language

Bing Spell Check | Language Understanding Linguistic Analysis | Text Analytics | Web Language Model

Knowledge

Academic Knowledge | Entity Linking | Knowledge Exploration | Recommendations

Search

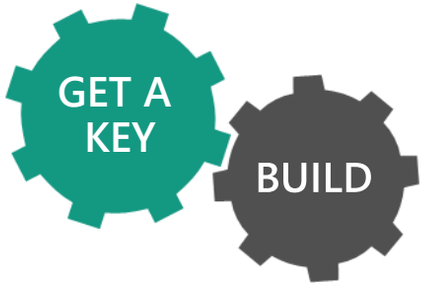
Bing Autosuggest | Bing Image Search | Bing News Search | Bing Video Search | Bing Web Search

Why Microsoft Cognitive Services?

Easy

Roll your own with REST APIs

Simple to add: just a few lines of code required



Flexible

Integrate into the language and platform of your choice

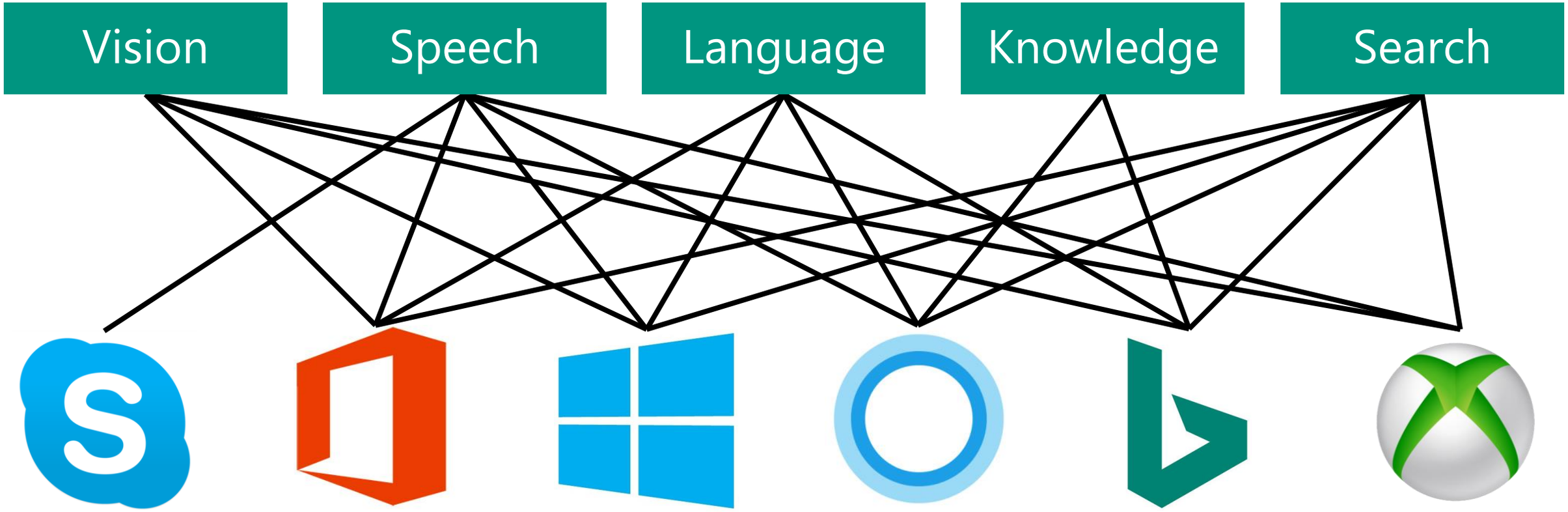
Breadth of offerings helps you find the right API for your app

Tested

Built by experts in their field from Microsoft Research, Bing, and Azure Machine Learning

Quality documentation, sample code, and community support

Powering products across Microsoft



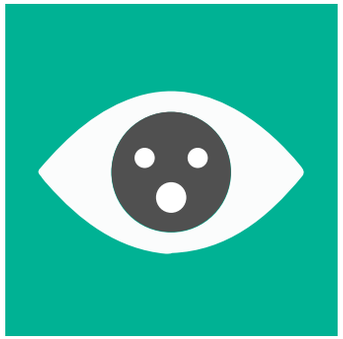
Vision

Computer Vision API

Distill actionable information from images

Face API

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



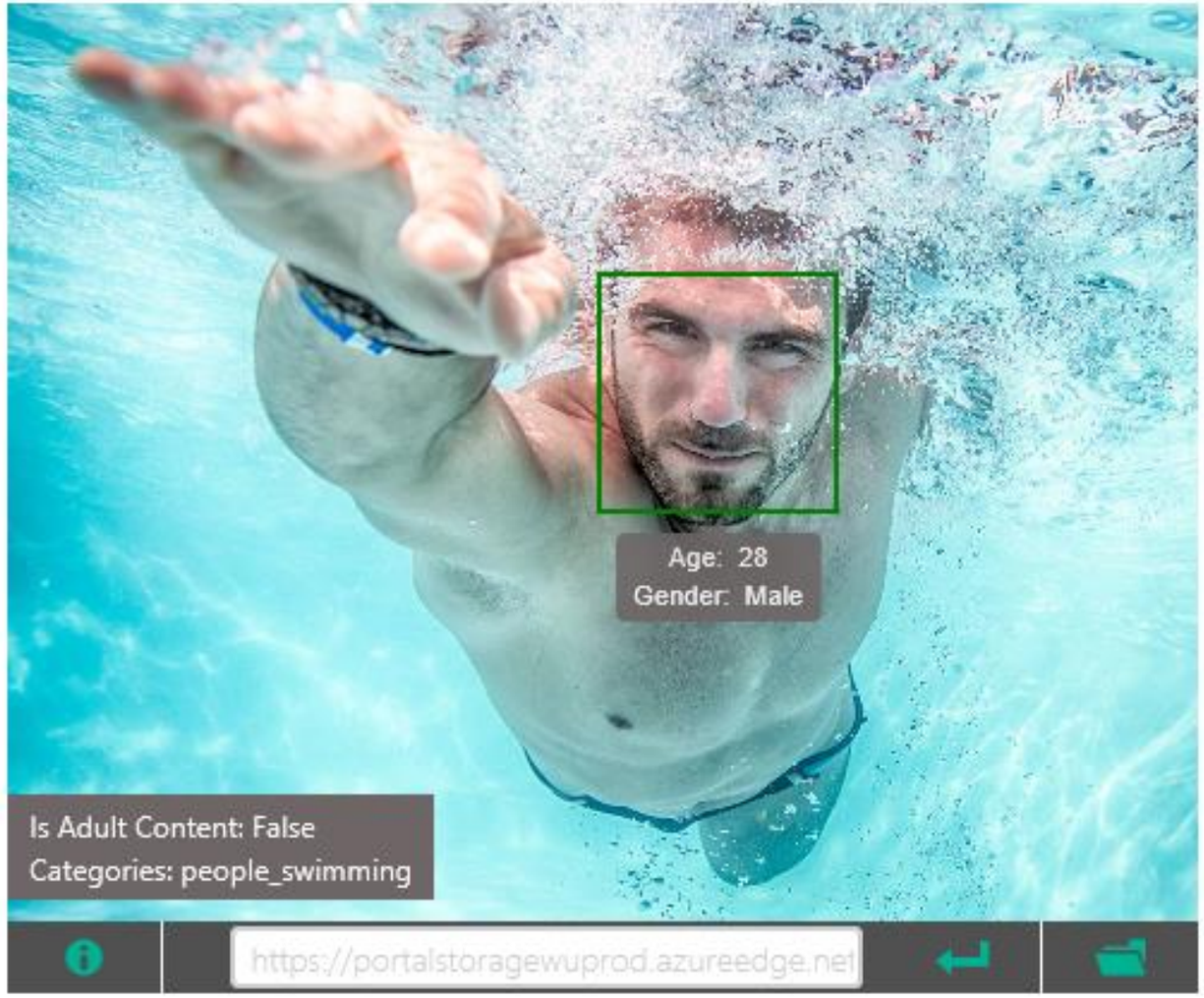
Emotion API

Personalize experiences with emotion recognition

Video API

Analyze, edit, and process videos within your app

Computer Vision API

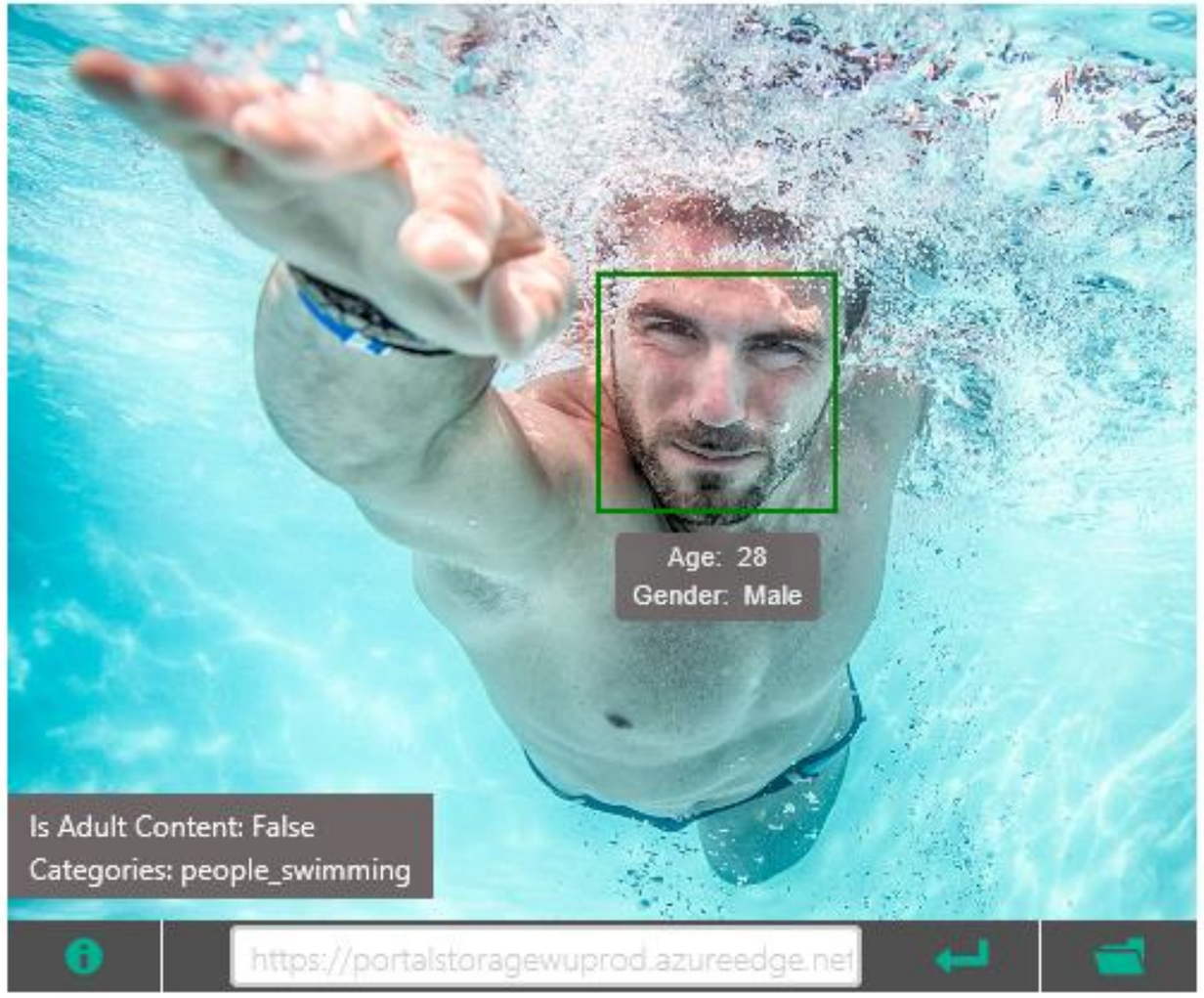


Features:

Feature Name	Value
Description	{ "type": 0, "captions": [{ "text": "a man swimming in a pool of water", "confidence": 0.7850108693093019 }] }
Tags	[{ "name": "water", "confidence": 0.9996442794799805 }, { "name": "sport", "confidence": 0.9504992365837097 }, { "name": "swimming", "confidence": 0.9062818288803101, "hint": "sport" }, { "name": "pool", "confidence": 0.8787588477134705 }, { "name": "water sport", "confidence": 0.631849467754364, "hint": "sport" }]
Image Format	jpeg
Image Dimensions	1500 x 1155
Clip Art Type	0 Non-clipart
Line Drawing Type	0 Non-LineDrawing
Black & White Image	False

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

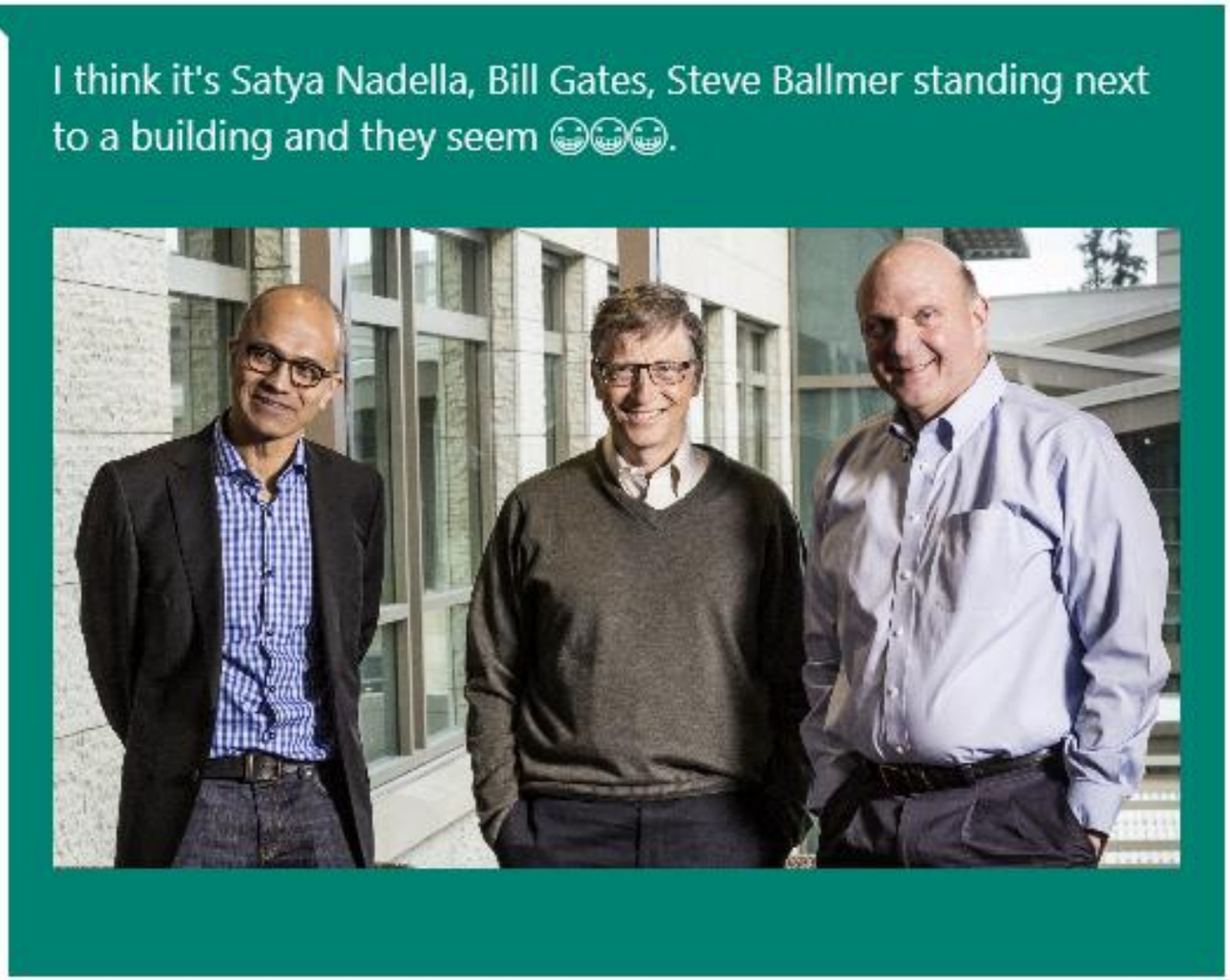
Computer Vision API



Is Adult Content	False
Adult Score	0.14916780591011047
Is Racy Content	False
Racy Score	0.12426207214593887
Categories	[{ "name": "people_swimming", "score": 0.98046875 }]
Faces	[{ "age": 28, "gender": "Male", "faceRectangle": { "left": 744, "top": 338, "width": 305, "height": 305 } }]
Dominant Color Background	
Dominant Color Foreground	
Dominant Colors	
Accent Color	#19A4B2

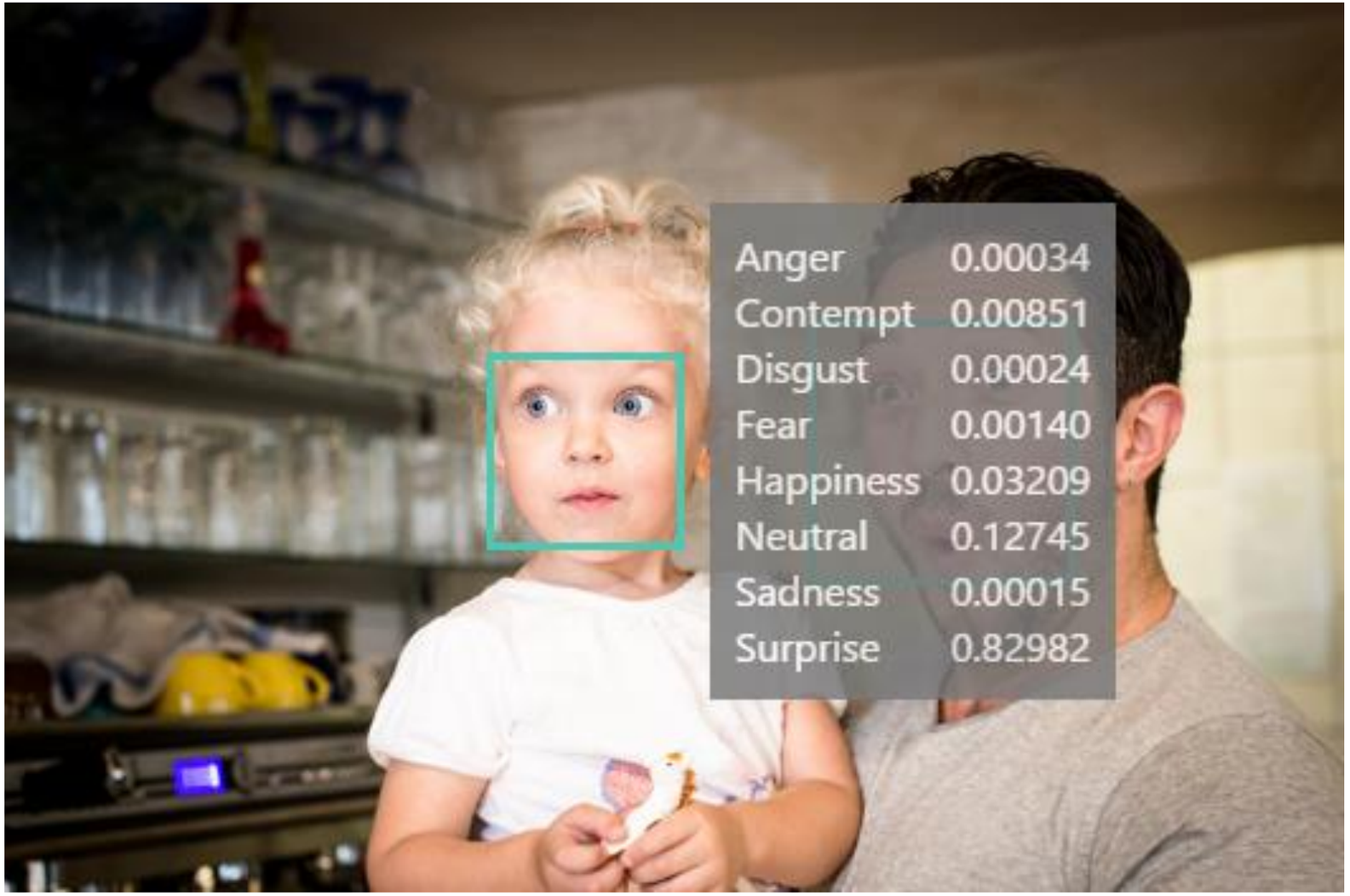
https://www.microsoft.com/cognitive-services/en-us/computer-vision-api

Computer Vision – celebrity detection



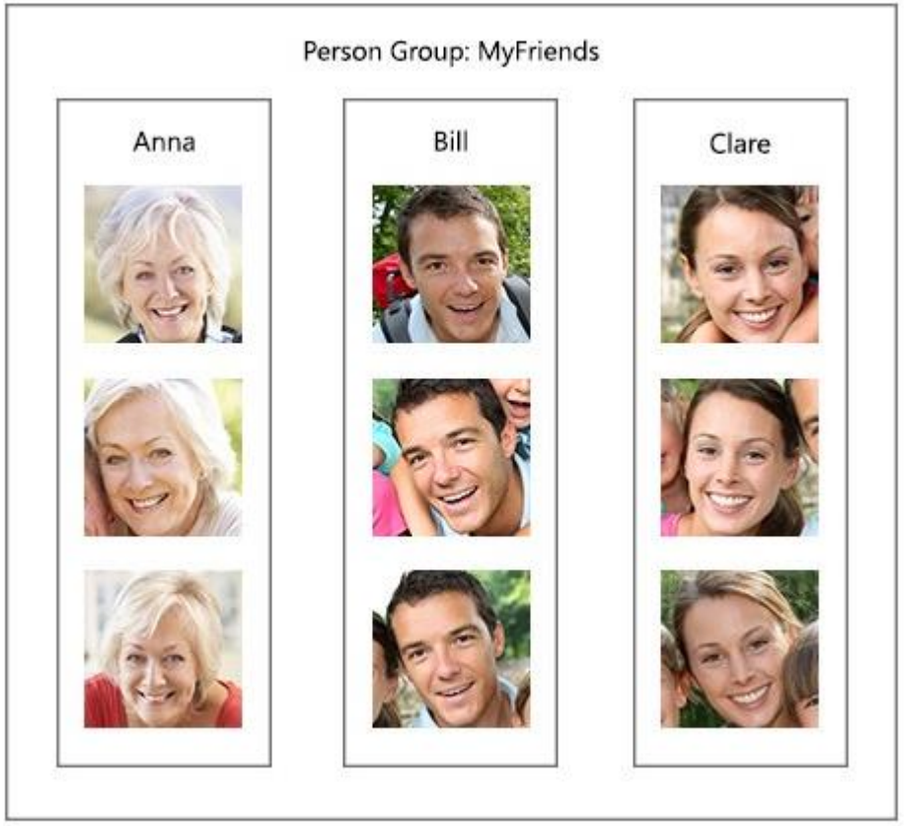
https://www.captionbot.ai

Emotion API



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

Face API


Person Group: MyFriends
Anna
Bill
Clare

Unknown
Unknown
Clare
Bill

Speech

Bing Speech API

Convert speech to text and back again, and understand its intent

Speaker Recognition API

Give your app the ability to know who's talking

Custom Recognition Intelligent Service

Fine-tune speech recognition for anyone, anywhere

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

Language Understanding Intelligent Service

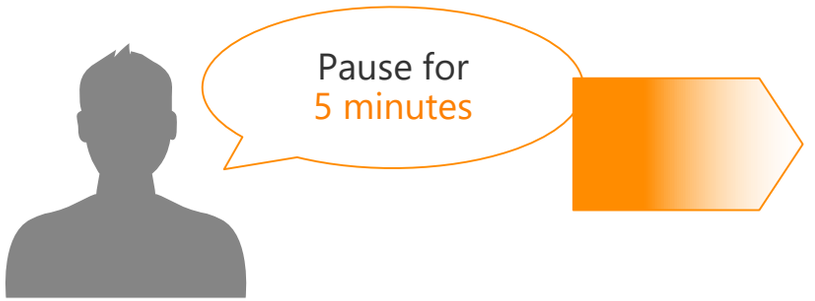
Understand what your users are saying

- Determines intent
- Detects entities

Seamless integration with Speech Recognition

Learns over time

Use pre-built, world class models from Bing and Cortana



Example 1:

Language: English (confidence: 100%)

Key phrases: I had a wonderful experience! The rooms were wonderful and the staff were helpful.

Sentiment: 98 %

Example 2:

Language: English (confidence: 100%)

Key phrases: I had a terrible time at the hotel. The staff were rude and the food was awful.

Sentiment: 1 %

Example 3:

Language: English (confidence: 100%)

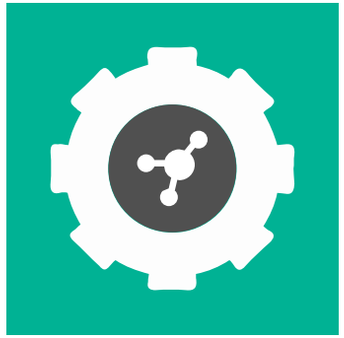
Key phrases: I had an okay stay at this hotel. The rooms were wonderful but the staff was rude.

Sentiment: 25 %

Knowledge

Academic Knowledge API

Explore relationships among academic papers, journals, and authors



Knowledge Exploration Service

Add interactive search over structured data to your project

Entity Linking Service

Contextually extend knowledge of people, locations, and events

Recommendations API

Provide personalized product recommendations for your customers

Mars is the fourth planet from the Sun and the second smallest planet in the Solar System, after Mercury. Named after the Roman god of war, it is often referred to as the "Red Planet" because the iron oxide prevalent on its surface gives it a reddish appearance.

GO>

Highlight Content | JSON


```
        }],
        "name":"De Graft",
        "wikipediaId":"Mercury (planet)",
        "score":0.999
    },
    {
        "matches":[{
            "text":"Roman god of war",
            "entries":[{
                "offset":122
            }]
        }],
        "name":"Mars",
        "wikipediaId":"Mars (mythology)",
        "score":0.007
    }]
}
```

Search

Bing Web Search API

Connect powerful search to your apps

Bing Autosuggest API

Give your app intelligent autosuggest options for searches

Bing Image Search API

Bring advanced image and metadata search to your app

Bing Video Search API

Trending videos, detailed metadata, and rich results

Bing News Search API

Link your users to robust and timely news searches

easy recipes

Examples

- burrito recipes
- new movies
- seattle seahawks
- ted talks
- weather today

Parameters

Market	en-us
SafeSearch	Moderate
Freshness	(unspecified)
Response Filter	(unspecified)

Preview JSON


```
{
  "_type": "SearchResponse",
  "webPages": {
    "webSearchUrl": "https://www.bing.com/cr?IG=BBBA5F1D16394191AA0628F8976270C6&CID=0ACB457A535
    "totalEstimatedMatches": 73500000,
    "value": [
      {
        "id": "https://bingapis.azure-api.net/api/v5/#WebPages.0",
        "name": "<b>Quick and Easy Recipes</b> - Allrecipes.com",
        "url": "http://www.bing.com/cr?IG=BBBA5F1D16394191AA0628F8976270C6&CID=0ACB457A5354648
        "displayUrl": "all<b>recipes</b>.com/<b>recipes</b>/1947/everyday-cooking/<b>quick-and-e
        "snippet": "Explore hundreds of top-rated <b>quick and easy recipes</b> for breakfast, l
        "deepLinks": [
          {
            "name": "Quick and Easy Dinners",
            "url": "http://www.bing.com/cr?IG=BBBA5F1D16394191AA0628F8976270C6&CID=0ACB457A53546
            "snippet": "Looking for quick and easy dinner recipes? Allrecipes has more than 2,79
          },
          {
            "name": "Quick and Easy Desserts",
            "url": "http://www.bing.com/cr?IG=BBBA5F1D16394191AA0628F8976270C6&CID=0ACB457A53546
            "snippet": "Easy homemade pies, cookies, cake, and more. Treat yourself with no-bake
          }
        ],
        "dateLastCrawled": "2016-04-25T11:45:00"
      },
      {
        "id": "https://bingapis.azure-api.net/api/v5/#WebPages.1",
        "name": "<b>Easy Recipes</b> - Kraft <b>Recipes</b>",
        "url": "http://www.bing.com/cr?IG=BBBA5F1D16394191AA0628F8976270C6&CID=0ACB457A5354648
        "displayUrl": "www.kraft<b>recipes</b>.com/<b>recipes</b>/dinner/<b>easy-recipes</b>/mai
        "snippet": "Discover <b>easy recipes</b> for chicken, pasta and desserts from Kraft <b>F
        "dateLastCrawled": "2016-04-25T04:55:00"
      },
      {
```

Image Search API

cute animals

Examples

- abstract art
- cute animals
- grand canyon
- nature wallpapers
- santorini sunset

Parameters

Market	en-us
SafeSearch	Moderate
Color	(unspecified)
Freshness	(unspecified)
Image Type	(unspecified)
License	(unspecified)
Size	(unspecified)

Preview JSON

Chicago

Examples

- abstract art
- cute animals
- grand canyon
- nature wallpapers
- santorini sunset

Parameters

Market	en-us
SafeSearch	Moderate
Color	(unspecified)
Freshness	(unspecified)
Image Type	(unspecified)
License	(unspecified)
Size	(unspecified)

Preview JSON

viral videos

Examples

- Adele songs
- fashion week
- nature timelapse
- recipes
- viral videos

Parameters

Market	en-us
SafeSearch	Moderate
Pricing	Free
Freshness	Week
Resolution	(unspecified)
Video Length	Short

Preview JSON

Developer Resources

Preview Pricing

https://www.microsoft.com/cognitive-services/en-us/pricing

Documentation

https://www.microsoft.com/cognitive-services/en-us/computer-vision-api/documentation

Client SDKs

https://github.com/Microsoft/ProjectOxford-ClientSDK
https://github.com/felixrieseberg/project-oxford (nodejs)
https://github.com/southwood/project-oxford-python

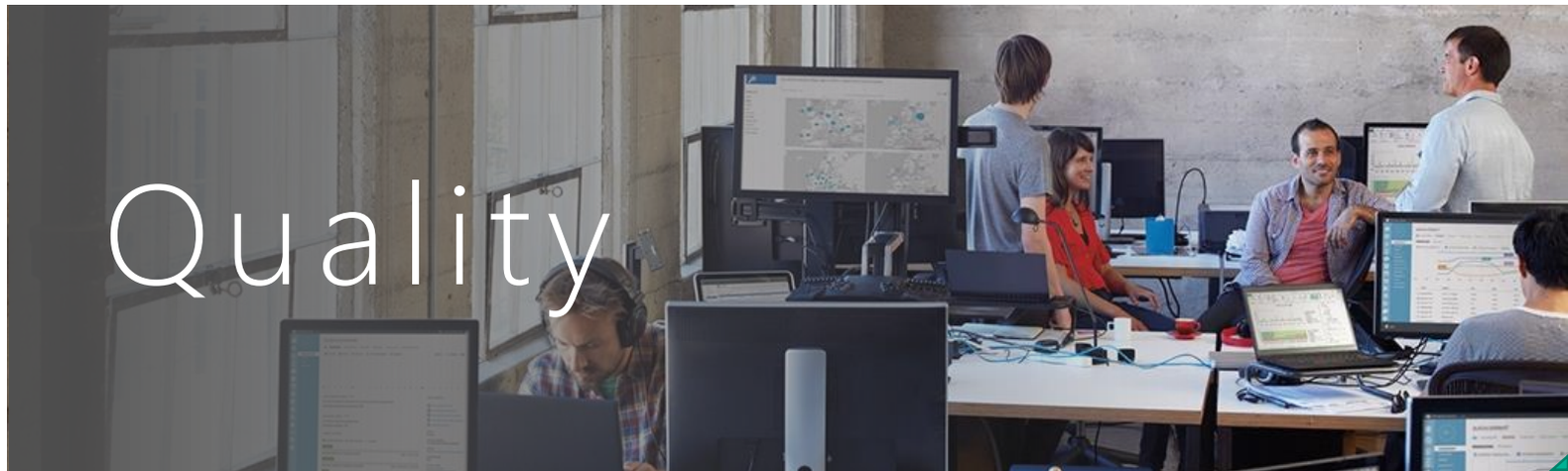
Example Code

https://github.com/jsturtevant/happy-image-tester-django
https://github.com/jsturtevant/happy-image-tester-nodejs

Join Our Community

https://stackoverflow.com/questions/tagged/microsoft-cognitive
https://social.msdn.microsoft.com/forums/azure/en-US/home?forum=mlapi
https://cognitive.uservoice.com/

Why Microsoft Cognitive Services?



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