

Visual Recognition

An Introduction to IBM Watson Visual Recognition service

Part One

Introduction

Available Resources

Classifiers & Classes

Prerequisites

- 1) Bluemix ID
- 2) A Visual Recognition service instance

Command Line Preparation

api_key=<api key value from service>

Other environment variables like
classifier_id, **image_url** as necessary

Part Two

Classify & Detect Faces

Classify an image using its image URL, against the default classifier

```
image_url=https://www.enterprise.com/content/dam/global-vehicle-images/cars/FORD_FOCU_2012-1.png
```

```
curl -X GET "https://gateway-a.watsonplatform.net/visual-recognition/api/v3/classify?api_key=${api_key}&version=2016-05-20&url=${image_url}"
```

Classify an image by uploading the image, against the default classifier

```
curl -X POST -F "images_file=@bird.jpg" "https://gateway-  
a.watsonplatform.net/visual-  
recognition/api/v3/classify?api_key=${api_key}&version=2016-05-20"
```


Detect a face using an image URL

```
image_url=https://images-na.ssl-images-  
amazon.com/images/M/MV5BMTM0ODU5Nzk2OV5BMTI5BanBnXkFtZTcwMzI2O  
DgyNQ@@._V1_UY1200_CR106,0,630,1200_AL_.jpg
```

```
curl -X GET "https://gateway-a.watsonplatform.net/visual-  
recognition/api/v3/detect_faces?api_key=${api_key}&version=2016-05-  
20&url=${image_url}"
```

Part Three

Custom Classifiers

Training Prerequisites

(for demo only)

- 1) A set of 20 images per class
(zip each set separately)
- 2) One or two test images per class

Training Superheroes!

- 1) Classifier is **superheroes**
- 2) Classes are: **superman**, **batman**, **batgirl**, **joker** and **spiderman**

Submit images for training

```
curl -X POST -F "batgirl_positive_examples=@batgirl.zip" -F  
"batman_positive_examples=@batman.zip" -F  
"joker_positive_examples=@joker.zip" -F  
"superman_positive_examples=@superman.zip" -F  
"spiderman_positive_examples=@spiderman.zip" -F "name=superheroes"  
"https://gateway-a.watsonplatform.net/visual-  
recognition/api/v3/classifiers?api_key=${api_key}&version=2016-05-20"
```

Check training status

```
curl -X GET "https://gateway-a.watsonplatform.net/visual-  
recognition/api/v3/classifiers/${classifier_id}?api_key=${api_key}&version=2016-  
05-20"
```

Various Tests

```
curl -X POST -F "images_file=@SupermanRoss.png" -F "parameters=@../superhero_params.json"  
"https://gateway-a.watsonplatform.net/visual-recognition/api/v3/classify?api_key=${api_key}&version=2016-05-20"
```

```
curl -X POST -F "images_file=@Batman-Arkham-City.jpg" -F "parameters=@../superhero_params.json"  
"https://gateway-a.watsonplatform.net/visual-recognition/api/v3/classify?api_key=${api_key}&version=2016-05-20"
```

```
curl -X POST -F "images_file=@batgirl_killing_joke.jpg" -F "parameters=@../superhero_params.json"  
"https://gateway-a.watsonplatform.net/visual-recognition/api/v3/classify?api_key=${api_key}&version=2016-05-20"
```

```
curl -X POST -F "images_file=@batman_face.jpg" -F "parameters=@../superhero_params.json"  
"https://gateway-a.watsonplatform.net/visual-recognition/api/v3/classify?api_key=${api_key}&version=2016-05-20"
```

Various Tests

```
curl -X POST -F "images_file=@batman_batgirl_mix.jpg" -F "parameters=@../../superhero_params.json"  
"https://gateway-a.watsonplatform.net/visual-recognition/api/v3/classify?api_key=${api_key}&version=2016-05-20"
```

```
curl -X POST -F "images_file=@spiderman_ben_reilly.jpg" -F "parameters=@../../superhero_params.json"  
"https://gateway-a.watsonplatform.net/visual-recognition/api/v3/classify?api_key=${api_key}&version=2016-05-20"
```

```
curl -X POST -F "images_file=@Spider-Carnage_Ben_Reilly.jpg" -F  
"parameters=@../../superhero_params.json" "https://gateway-a.watsonplatform.net/visual-  
recognition/api/v3/classify?api_key=${api_key}&version=2016-05-20"
```


Delete Custom Classifier

```
curl -X DELETE "https://gateway-a.watsonplatform.net/visual-  
recognition/api/v3/classifiers/${classifier_id}?api_key=${api_key}&version=2016-  
05-20"
```

Part Four

Resources

- Watson Developer Cloud
 - <https://www.ibm.com/watson/developercloud/>
- Watson API Explorer
 - <https://watson-api-explorer.mybluemix.net/>
- Visual Recognition API Explorer
 - <https://watson-api-explorer.mybluemix.net/apis/visual-recognition-v3#/>
- Visual Recognition API Reference
 - <http://www.ibm.com/watson/developercloud/visual-recognition/api/v3>
- Visual Recognition Demo Application
 - <https://visual-recognition-demo.mybluemix.net/>

- Visual Recognition documentation
 - <https://www.ibm.com/watson/developercloud/doc/visual-recognition/>
- Classifying an image tutorial
 - <https://www.ibm.com/watson/developercloud/doc/visual-recognition/basic-tutorials.shtml>
- Custom classifiers tutorial
 - <https://www.ibm.com/watson/developercloud/doc/visual-recognition/classifiers-tutorials.shtml>
- Updating classifiers and Guidelines
 - <https://www.ibm.com/watson/developercloud/doc/visual-recognition/customizing.shtml>
- Watson Webinars
 - <http://www.ibm.com/watson/building-with-watson-webinar.html>