

assignment9-5-sdai

April 20, 2023

```
[11]: !pip install --upgrade azure-cognitiveservices-vision-face  
      !pip install azure-cognitiveservices-vision-computervision
```

Collecting azure-cognitiveservices-vision-face

Downloading azure_cognitiveservices_vision_face-0.6.0-py2.py3-none-any.whl (67 kB)

67.7/67.7 kB

7.2 MB/s eta 0:00:00

Requirement already satisfied: msrest>=0.5.0 in

/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from azure-cognitiveservices-vision-face) (0.7.1)

Requirement already satisfied: azure-common~=1.1 in

/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from azure-cognitiveservices-vision-face) (1.1.28)

Requirement already satisfied: azure-core>=1.24.0 in

/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from msrest>=0.5.0->azure-cognitiveservices-vision-face) (1.26.4)

Requirement already satisfied: requests~=2.16 in

/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from msrest>=0.5.0->azure-cognitiveservices-vision-face) (2.28.1)

Requirement already satisfied: isodate>=0.6.0 in

/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from msrest>=0.5.0->azure-cognitiveservices-vision-face) (0.6.1)

Requirement already satisfied: requests-oauthlib>=0.5.0 in

/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from msrest>=0.5.0->azure-cognitiveservices-vision-face) (1.3.1)

Requirement already satisfied: certifi>=2017.4.17 in

/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from msrest>=0.5.0->azure-cognitiveservices-vision-face) (2022.9.24)

Requirement already satisfied: typing-extensions>=4.3.0 in

/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from azure-core>=1.24.0->msrest>=0.5.0->azure-cognitiveservices-vision-face) (4.3.0)

Requirement already satisfied: six>=1.11.0 in

/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from azure-core>=1.24.0->msrest>=0.5.0->azure-cognitiveservices-vision-face) (1.16.0)

Requirement already satisfied: idna<4,>=2.5 in

/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from requests~=2.16->msrest>=0.5.0->azure-cognitiveservices-vision-face) (3.3)

Requirement already satisfied: charset-normalizer<3,>=2 in
/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from
requests~=2.16->msrest>=0.5.0->azure-cognitiveservices-vision-face) (2.0.4)

Requirement already satisfied: urllib3<1.27,>=1.21.1 in
/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from
requests~=2.16->msrest>=0.5.0->azure-cognitiveservices-vision-face) (1.26.11)

Requirement already satisfied: oauthlib>=3.0.0 in
/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (from requests-
oauthlib>=0.5.0->msrest>=0.5.0->azure-cognitiveservices-vision-face) (3.2.2)

Installing collected packages: azure-cognitiveservices-vision-face

Successfully installed azure-cognitiveservices-vision-face-0.6.0

Requirement already satisfied: azure-cognitiveservices-vision-computervision in
/Users/sindhukare/opt/anaconda3/lib/python3.9/site-packages (0.9.0)

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 Note: you may need to restart the kernel to use updated packages.

```
[33]: from azure.cognitiveservices.vision.computervision import ComputerVisionClient
from azure.cognitiveservices.vision.computervision.models import
    ↳OperationStatusCodes
from azure.cognitiveservices.vision.computervision.models import
    ↳VisualFeatureTypes
from msrest.authentication import CognitiveServicesCredentials
from azure.cognitiveservices.vision.face import FaceClient

from array import array
import os
from PIL import Image
import sys
import time
import requests
from matplotlib.patches import Rectangle
%matplotlib inline
import matplotlib.pyplot as plt
import json
from io import BytesIO

# This is the location of subscription Key and Endpoint used in Azure Vision
↳API Environment
subscription_key = "ec2e5bbfea8e43918d736edb0e9623e6"
endpoint = "https://testrsg.cognitiveservices.azure.com/"
image_caption = analysis["description"]["captions"][0]["text"].capitalize()

#this Section defines items passed through API to Azure

analyze_url = endpoint + "vision/v3.0/analyze"

# Set image_url to the URL of an image that you want to analyze.
image_url = "https://api.openverse.engineering/v1/images/
↳fdc34d0d-8ef1-452b-b88c-dbc463b19f22/thumb/"

#Passing to API using HTTP post requires setup of headers to define my
↳subscription key.
headers = {'Ocp-Apim-Subscription-Key': subscription_key}
#parameters desired are passed through "params" definition and indicate
↳specifically what is desired from Azure API
```

```

params = {'visualFeatures': 'Categories,Description,Color'}
#In this case, data containing items to operate (an Image) is supplied to be
↳processed according to the parameters.
data = {'url': image_url}

#this data is sent as a post to the Azure host for analysis.
response = requests.post(analyze_url, headers=headers,
                        params=params, json=data)
response.raise_for_status()

#this concludes the Azure API elements.

# The 'analysis' object contains various fields that describe the image. The
↳most
# relevant caption for the image is obtained from the 'description' property.
analysis = response.json()
print(json.dumps(response.json()))
# Display the image and overlay it with the caption.
image = Image.open(BytesIO(requests.get(image_url).content))
plt.imshow(image)
plt.axis("off")
_ = plt.title(image_caption, size="x-large", y=-0.1)
plt.show()

```

```

{"categories": [{"name": "outdoor_", "score": 0.00390625, "detail":
{"landmarks": []}], {"name": "outdoor_street", "score": 0.14453125, "detail":
{"landmarks": []}], {"name": "people_crowd", "score": 0.31640625}], "color":
{"dominantColorForeground": "Grey", "dominantColorBackground": "Black",
"dominantColors": ["Grey", "Black"], "accentColor": "6F3F37", "isBwImg": false,
"isBWImg": false}, "description": {"tags": ["person", "outdoor", "building",
"street", "road", "people", "walking", "group", "sidewalk", "city", "standing",
"woman", "busy", "man", "cross", "corner", "sitting", "young", "holding",
"sign", "crowded", "crowd", "doing", "store", "parked", "riding", "umbrella"],
"captions": [{"text": "a group of people walking down the street", "confidence":
0.985491286580084}]], "requestId": "b9ee09bd-262d-43ae-9698-6dd378bd725a",
"metadata": {"height": 902, "width": 600, "format": "Jpeg"}}

```



A group of people walking down the street

[]: