assignment6_3

July 18, 2021

[1]:
```
from tensorflow.keras.applications.resnet50 import ResNet50
from tensorflow.keras.preprocessing import image
from tensorflow.keras.applications.resnet50 import preprocess_input,␣
↪decode_predictions
import numpy as np
```

[2]:
```
model = ResNet50(weights='imagenet')
```

```
Downloading data from https://storage.googleapis.com/tensorflow/keras-
applications/resnet/resnet50_weights_tf_dim_ordering_tf_kernels.h5
102973440/102967424 [==============================] - 5s 0us/step
```

[5]:
```
img_path1 = 'dsc650-1/dsc650/assignments/assignment05/donald.jpg'
img_path2 = 'dsc650-1/dsc650/assignments/assignment05/mickey.jpg'
img_path3 = 'dsc650-1/dsc650/assignments/assignment05/minnie.jpg'
img_path4 = 'dsc650-1/dsc650/assignments/assignment05/piglet.jpg'
img_path5 = 'dsc650-1/dsc650/assignments/assignment05/pluto.jpg'
img_path6 = 'dsc650-1/dsc650/assignments/assignment05/pooh.jpg'
```

[ ]:
```
with open('image.gif', 'rb') as imagefile:
    base64string = base64.b64encode(imagefile.read()).decode('ascii')

with open('testfile.txt', 'w') as outputfile:
    outputfile.write(base64string)
```

[18]:
```
import os

cwd = os.getcwd()
print(cwd)
```

```
/home/jovyan/dsc650-1/dsc650/assignments/assignment06
```

[30]:
```
from os import listdir
from PIL import Image as PImage

def loadImages(path):
    # return array of images
```

```
    imagesList = listdir(path)
    loadedImages = []
    for image in imagesList:
        img = PImage.open(path + "/" + image)
        loadedImages.append(img)

    return loadedImages

path = r"/home/jovyan/dsc650-1/dsc650/assignments/assignment06/images"
```

[36]:
```
img = loadImages(path)
```

[32]:
```
img = image.load_img(path, target_size=(224, 224))
x = image.img_to_array(img)
x = np.expand_dims(x, axis=0)
x = preprocess_input(x)
```

```
---------------------------------------------------------------------------
IsADirectoryError                         Traceback (most recent call last)
<ipython-input-32-d026562fa3da> in <module>
----> 1 img = image.load_img(path, target_size=(224, 224))
      2 x = image.img_to_array(img)
      3 x = np.expand_dims(x, axis=0)
      4 x = preprocess_input(x)

/opt/conda/lib/python3.8/site-packages/tensorflow/python/keras/preprocessing/
 ↪image.py in load_img(path, grayscale, color_mode, target_size, interpolation)
    297       ValueError: if interpolation method is not supported.
    298   """
--> 299   return image.load_img(path, grayscale=grayscale, color_mode=color_mod
    300                        target_size=target_size,␣
 ↪interpolation=interpolation)
    301

/opt/conda/lib/python3.8/site-packages/keras_preprocessing/image/utils.py in␣
 ↪load_img(path, grayscale, color_mode, target_size, interpolation)
    111         raise ImportError('Could not import PIL.Image. '
    112                           'The use of `load_img` requires PIL.')
--> 113     with open(path, 'rb') as f:
    114         img = pil_image.open(io.BytesIO(f.read()))
    115         if color_mode == 'grayscale':

IsADirectoryError: [Errno 21] Is a directory: '/home/jovyan/dsc650-1/dsc650/
 ↪assignments/assignment06/images'
```

[ ]:
```

```