10

January 23, 2024

[1]:
```
%pylab inline
import torch
import torchvision
from PIL import Image
import json
class_idx = json.load(open("imagenet_class_index.json"))
I1 = Image.open('dog.jpg')
I2 = Image.open('cat.jpg')
```

```
%pylab is deprecated, use %matplotlib inline and import the required libraries.
Populating the interactive namespace from numpy and matplotlib
```

[ ]:
```
model = torchvision.models.resnext101_32x8d(pretrained=True, progress=False)
# model = torchvision.models.mobilenet_v2(pretrained=True, progress=False)
```

[4]:
```
transform = torchvision.transforms.Compose([
    torchvision.transforms.Resize(224),
    torchvision.transforms.CenterCrop(224),
    torchvision.transforms.ToTensor(),
    torchvision.transforms.Normalize(mean=[0.485, 0.456, 0.406], std=[0.229, 0.
 ↪224, 0.225])])

model.eval()

p = model(transform(I1)[None])[0]
print( ' , '.join([class_idx[str(int(i))][1] for i in p.
 ↪argsort(descending=True)[:5]]) )
p = model(transform(I2)[None])[0]
print( ' , '.join([class_idx[str(int(i))][1] for i in p.
 ↪argsort(descending=True)[:5]]) )
```

```
wire-haired_fox_terrier , toy_terrier , Brabancon_griffon , standard_schnauzer ,
Lakeland_terrier
tiger_cat , tabby , Egyptian_cat , lynx , tiger
```

[5]:
```
model.fc = torch.nn.Linear(2048, 10)
```

[6]:
```
model(transform(I)[None])
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[6], line 1
----> 1 model(transform(I)[None])

NameError: name 'I' is not defined
```

[ ]: