

```
1 import os
2 import numpy as np
3 import PIL.Image as Image
4 import torch
5 from torch.utils import data
6 from torchvision import transforms
7 import pdb
8 import random
9 import sys
10 import matplotlib.pyplot as plt
11
12
13 class ImageNetDetCls(data.Dataset):
14     def __init__(self, root,
15                 source_transform=None):
16         super(ImageNetDetCls, self).__init__()
17         self.root = root
18         self.s_transform = source_transform
19         txts = os.listdir(os.path.join(root, 'data', 'det_lists'))
20         txts = filter(lambda x: x.startswith('train_pos') or
21                       x.startswith('train_part'), txts)
21         file2lbl = {}
22         for txt in txts:
23             files = open(os.path.join(root, 'data', 'det_lists',
24                                     txt)).readlines()
25             for f in files:
26                 f = f.strip('\n')+'.JPEG'
27                 if f in file2lbl:
28                     file2lbl[f] += [int(txt.split('.')[0].split('_')[-1])]
29                 else:
30                     file2lbl[f] = [int(txt.split('.')[0].split('_')[-1])]
31             self.file2lbl = file2lbl.items()
32
33     def __len__(self):
34         return len(self.file2lbl)
35
36     def __getitem__(self, index):
37         # load image
38         img_file, lbl = self.file2lbl[index]
39         img = Image.open(os.path.join(self.root, 'images',
40                                     img_file)).convert('RGB')
41         if self.s_transform is not None:
42             img = self.s_transform(img)
43         onehot = np.zeros(200)
44         lbl = np.array(lbl)-1
45         onehot[lbl] = 1
46         onehot = torch.from_numpy(onehot).float()
47         return img, onehot
48
49 if __name__ == "__main__":
50     sb = ImageNetDetCls('../data/datasets/ILSVRC2014_devkit')
51     img, gt = sb.__getitem__(0)
52     pdb.set_trace()
```