

DataLoader

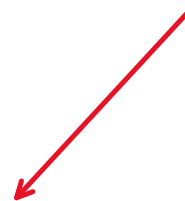
2025年11月20日 22:51



dataset



dataloader



每次取多少数据，怎么取

```
test_data = torchvision.datasets.CIFAR10(root='./data', train=True, transform=transforms.Compose([transforms.RandomCrop(32), transforms.RandomHorizontalFlip(), transforms.ToTensor(), transforms.Normalize([0.4914, 0.4822, 0.4465], [0.203, 0.181, 0.201])]), download=True)
test_loader = DataLoader(dataset=test_data, batch_size=100)
```

1 ALT

```
def __getitem__(self, index: int) -> Tuple[Any, Any]:
    """
    Args:
        index (int): Index

    Returns:
        tuple: (image, target) where target is index of the class of the image
    """
    img, target = self.data[index], self.targets[index]

    # doing this so that it is consistent with all other datasets
    # to return a PIL Image
    img = Image.fromarray(img)

    if self.transform is not None:
        img = self.transform(img)

    if self.target_transform is not None:
        target = self.target_transform(target)

    return img, target
```

返回值

```
getitem():  
    return img, target
```

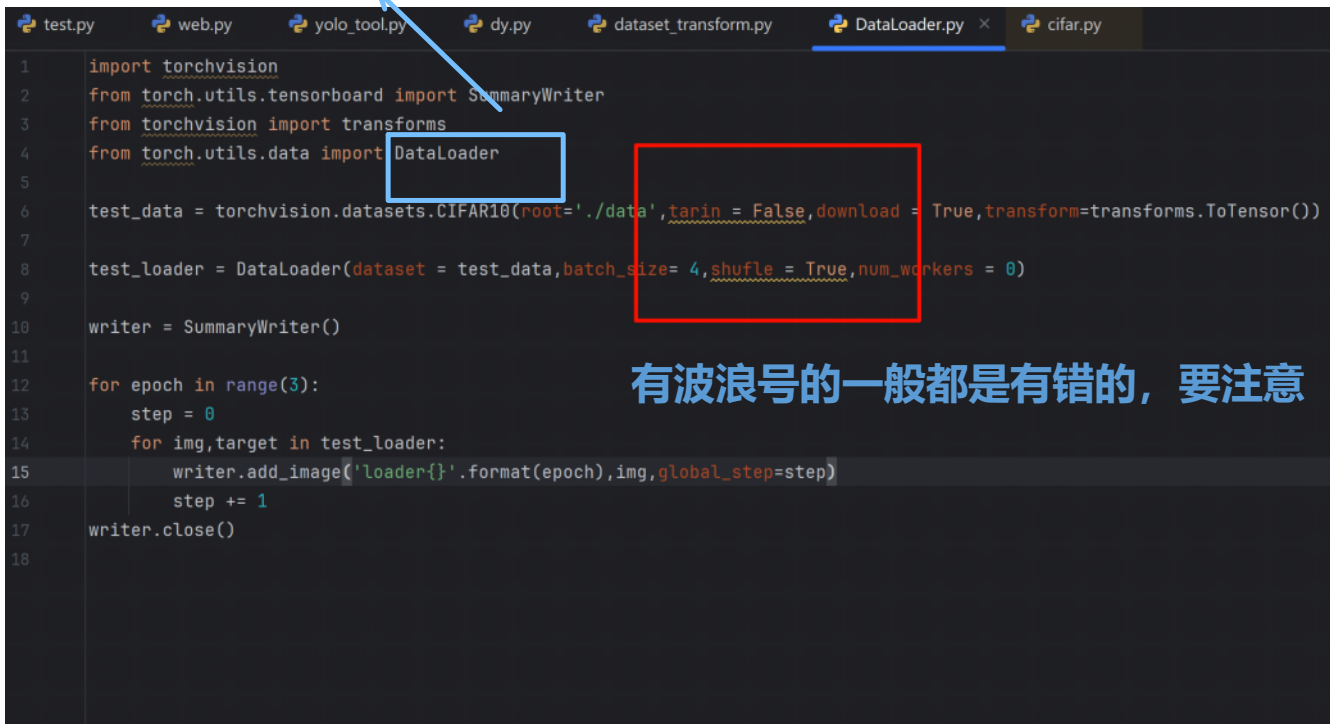
dataset

```
img0, target0 = dataset[0]  
img1, target1 = dataset[1]  
img2, target2 = dataset[2]  
img3, target3 = dataset[3]
```

dataloader(batch_size=4)

imgs, targets

很容易拼写错



```
1 import torchvision  
2 from torch.utils.tensorboard import SummaryWriter  
3 from torchvision import transforms  
4 from torch.utils.data import DataLoader  
5  
6 test_data = torchvision.datasets.CIFAR10(root='./data', train = False, download = True, transform=transforms.ToTensor())  
7  
8 test_loader = DataLoader(dataset = test_data, batch_size= 4, shufle = True, num_workers = 0)  
9  
10 writer = SummaryWriter()  
11  
12 for epoch in range(3):  
13     step = 0  
14     for img, target in test_loader:  
15         writer.add_image('loader{}'.format(epoch), img, global_step=step)  
16         step += 1  
17 writer.close()  
18
```

有波浪号的一般都是有错的，要注意

```
AssertionError: size of input tensor and input format are different.      tensor shape: (4, 3, 32, 32), input_format: CHW
```

```
ep = 0  
for img, target in test_loader:  
    data = img  
    writer.add_image('loader{}'.format(epoch), data, global_step=step, dataformats='NCHW')  
    step += 1  
writer.close()
```

```
epoch in range(3):
    step = 0
    for img, target in loader:
        data = model(img)
        writer.add_image('loader{}'.format(epoch), data, global_step=step, dataformats='NCHW')
        step += 1
    writer.close()
```

类 SummaryWriter
def add_image(self, tag: str, img_tensor: Any, global_step: int = None, walltime: float = None, dataformats: str = 'CHW') -> None

不知道啥时候又变成CHW了