

Python小练习： argparse的用法

作者：凯鲁嘎吉 - 博客园 <http://www.cnblogs.com/kailugaji/>

中文文档：[argparse --- 命令行选项、参数和子命令解析器](#)

1. test.py

```
#!/usr/bin/env python3
# -*- coding=utf-8 -*-
# 参考： argparse --- 命令行选项、参数和子命令解析器
# https://docs.python.org/zh-cn/3/library/argparse.html#argumentparser-objects
# -----
# https://www.cnblogs.com/kailugaji/
import argparse

# I. 创建 ArgumentParser() 对象
parser = argparse.ArgumentParser(
    prog='kailugaji', usage='%(prog)s [options]',
    description = 'argparse --- 命令行选项、参数和子命令解析器',
    epilog = '凯鲁嘎吉 - 博客园: https://www.cnblogs.com/kailugaji/')

# II. 调用 add_argument() 方法添加参数
parser.add_argument('--dataset', '-ds', default='cifar10',
                    choices=['cifar10', 'cifar100', 'tin', 'IN'], help='which dataset to use')
parser.add_argument('--optimizer', '-opt', default='sgd',
                    choices=['sgd', 'adam', 'adagrad'], help='which optimizer to use')
parser.add_argument('--num_workers', '-cpus', default=16, type=int)
parser.add_argument('--batch-size', '-bs', type=int, default=256, help='batch size for training')
# 在参数解析时，参数中并不区分字符 '-' 和 '_'
```

如上所述，在添加使用的是'-batch-size'，但是在解析时使用的是args.batch_size

III. 使用 parse_args() 解析添加的参数

```
args = parser.parse_args()
```

打印

```
print("文件test.py的帮助信息：")
```

```
parser.print_help()
```

```
print("\n-----")
```

```
print("方式一：")
```

```
print("1. args: ", args)
```

```
print("2. Dataset: ",args.dataset)
```

```
print("3. Num_workers: ", args.num_workers)
```

```
print("4. Batch Size: ", args.batch_size)
```

```
print("5. Optimizer: ", args.optimizer)
```

```
args_2 = parser.parse_args(
```

```
    ['-bs', '128', '-ds', 'tin', '-opt', 'adagrad', '-cpus', '8'])
```

打印

```
print("\n-----")
```

```
print("方式二：")
```

```
print("1. args_2: ", args_2)
```

```
print("2. Dataset: ",args_2.dataset)
```

```
print("3. Num_workers: ", args_2.num_workers)
```

```
print("4. Batch Size: ", args_2.batch_size)
```

```
print("5. Optimizer: ", args_2.optimizer)
```

2. 结果

文件test.py的帮助信息:

usage: kailugaji [options]

argparse --- 命令行选项、参数和子命令解析器

optional arguments:

- h, --help show this help message and exit
- dataset {cifar10,cifar100,tin,IN}, -ds {cifar10,cifar100,tin,IN}
which dataset to use
- optimizer {sgd,adam,adagrad}, -opt {sgd,adam,adagrad}
which optimizer to use
- num_workers NUM_WORKERS, -cpus NUM_WORKERS
- batch-size BATCH_SIZE, -bs BATCH_SIZE
batch size for training

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方式一:

1. args: Namespace(batch_size=256, dataset='cifar10', num_workers=16, optimizer='sgd')
2. Dataset: cifar10
3. Num_workers: 16
4. Batch Size: 256
5. Optimizer: sgd

方式二:

1. args_2: Namespace(batch_size=128, dataset='tin', num_workers=8, optimizer='adagrad')
2. Dataset: tin
3. Num_workers: 8

- 4. Batch Size: 128
- 5. Optimizer: adagrad

3. 参考文献

[argparse --- 命令行选项、参数和子命令解析器](#)