I used my own PC, so the version of Pytorch was >1.0.0

That's why we are needed in adaptaion of given code to a newest version of Pytorch rules:

In the 'pytorch-classification-master' folder, open 'cifar.py' in text editor and apply tne following changes:

1)   In line 247, change this lines of code:

```
if use_cuda:
        inputs, targets = inputs.cuda(), targets.cuda(async=True)
```

To this lines of code:

```
if use_cuda:
        inputs, targets = inputs.cuda(),
targets.cuda(non_blocking=True)
```

2)   In line 257, change this lines of code:

```
losses.update(loss.data[0], inputs.size(0))
top1.update(prec1[0], inputs.size(0))
top5.update(prec5[0], inputs.size(0))
```

To this lines of code:

```
losses.update(loss.data, inputs.size(0))
top1.update(prec1, inputs.size(0))
top5.update(prec5, inputs.size(0))
```

3)   In line 314, change this lines of code:

```
losses.update(loss.data[0], inputs.size(0))

top1.update(prec1[0], inputs.size(0))

top5.update(prec5[0], inputs.size(0))
```

To this lines of code:

```
losses.update(loss.data, inputs.size(0))

top1.update(prec1, inputs.size(0))

top5.update(prec5, inputs.size(0))
```

basic tasks:

```
python cifar.py -a resnet --depth 20 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar10/part1/20
```

```
python cifar.py -a resnet --depth 56 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar10/part1/56
```

```
python cifar.py -a resnet --depth 110 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar10/part1/110
```

```
python cifar.py -a resnet --depth 20 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar10/part2/20
```

```
python cifar.py -a resnet --depth 56 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar10/part2/56
```

```
python cifar.py -a resnet --depth 110 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar10/part2/110
```

```
python cifar.py -a resnet --depth 20 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar10/part3/20
```

```
python cifar.py -a resnet --depth 56 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar10/part3/56
```

python cifar.py -a resnet --depth 110 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar10/part3/110

python cifar.py -a resnet --dataset cifar100 --depth 20 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar100/part1/20

python cifar.py -a resnet --dataset cifar100 --depth 56 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar100/part1/56

python cifar.py -a resnet --dataset cifar100 --depth 110 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar100/part1/110

python cifar.py -a resnet --dataset cifar100 --depth 20 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar100/part2/20

python cifar.py -a resnet --dataset cifar100 --depth 56 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar100/part2/56

python cifar.py -a resnet --dataset cifar100 --depth 110 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar100/part2/110

python cifar.py -a resnet --dataset cifar100 --depth 20 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar100/part3/20

python cifar.py -a resnet --dataset cifar100 --depth 56 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar100/part3/56

python cifar.py -a resnet --dataset cifar100 --depth 110 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint results_required/cifar100/part3/110

optional 1

python cifar.py -a resnet --dataset cifar10 --depth 20 --lr 1 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-20L-lr1

python cifar.py -a resnet --dataset cifar100 --depth 20 --lr 1 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-206L-lr1

python cifar.py -a resnet --dataset cifar10 --depth 20 --lr 0.5 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-20L-lr0_5

python cifar.py -a resnet --dataset cifar100 --depth 20 --lr 0.5 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-20L-lr0_5

python cifar.py -a resnet --dataset cifar10 --depth 20 --lr 0.2 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-20L-lr0_2

python cifar.py -a resnet --dataset cifar100 --depth 20 --lr 0.2 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-20L-lr0_2

python cifar.py -a resnet --dataset cifar10 --depth 20 --lr 0.01 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-20L-lr0_01

python cifar.py -a resnet --dataset cifar100 --depth 20 --lr 0.01 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-20L-lr0_01

python cifar.py -a resnet --dataset cifar10 --depth 20 --lr 0.02 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-20L-lr0_02

python cifar.py -a resnet --dataset cifar100 --depth 20 --lr 0.02 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-20L-lr0_02

python cifar.py -a resnet --dataset cifar10 --depth 20 --lr 0.05 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-20L-lr0_05

python cifar.py -a resnet --dataset cifar100 --depth 20 --lr 0.05 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-20L-lr0_05

python cifar.py -a resnet --dataset cifar10 --depth 56 --lr 1 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-56L-lr1

python cifar.py -a resnet --dataset cifar100 --depth 56 --lr 1 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-56L-lr1

python cifar.py -a resnet --dataset cifar10 --depth 56 --lr 0.5 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-56L-lr0_5

python cifar.py -a resnet --dataset cifar100 --depth 56 --lr 0.5 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-56L-lr0_5

python cifar.py -a resnet --dataset cifar10 --depth 56 --lr 0.2 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-56L-lr0_2

python cifar.py -a resnet --dataset cifar100 --depth 56 --lr 0.2 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-56L-lr0_2

python cifar.py -a resnet --dataset cifar10 --depth 56 --lr 0.01 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-56L-lr0_01

python cifar.py -a resnet --dataset cifar100 --depth 56 --lr 0.01 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-56L-lr0_01

python cifar.py -a resnet --dataset cifar10 --depth 56 --lr 0.02 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-56L-lr0_02

python cifar.py -a resnet --dataset cifar100 --depth 56 --lr 0.02 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-56L-lr0_02

python cifar.py -a resnet --dataset cifar10 --depth 56 --lr 0.05 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-56L-lr0_05

python cifar.py -a resnet --dataset cifar100 --depth 56 --lr 0.05 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-56L-lr0_05

python cifar.py -a resnet --dataset cifar10 --depth 110 --lr 1 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-110L-lr1

python cifar.py -a resnet --dataset cifar100 --depth 110 --lr 1 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-110L-lr1

python cifar.py -a resnet --dataset cifar10 --depth 110 --lr 0.5 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_1/resnet-cifar10-110L-lr0_5

python cifar.py -a resnet --dataset cifar100 --depth 110 --lr 0.5 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_1/resnet-cifar100-110L-lr0_5

```
python cifar.py -a resnet --dataset cifar10 --depth 110 --lr 0.2 --epochs 164 --
schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint
optional_1_results/cifar10/part_1/resnet-cifar10-110L-lr0_2

python cifar.py -a resnet --dataset cifar100 --depth 110 --lr 0.2 --epochs 164 --
schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint
optional_1_results/cifar100/part_1/resnet-cifar100-110L-lr0_2

python cifar.py -a resnet --dataset cifar10 --depth 110 --lr 0.01 --epochs 164 --
schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint
optional_1_results/cifar10/part_1/resnet-cifar10-110L-lr0_01

python cifar.py -a resnet --dataset cifar100 --depth 110 --lr 0.01 --epochs 164 --
schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint
optional_1_results/cifar100/part_1/resnet-cifar100-110L-lr0_01

python cifar.py -a resnet --dataset cifar10 --depth 110 --lr 0.02 --epochs 164 --
schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint
optional_1_results/cifar10/part_1/resnet-cifar10-110L-lr0_02

python cifar.py -a resnet --dataset cifar100 --depth 110 --lr 0.02 --epochs 164 --
schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint
optional_1_results/cifar100/part_1/resnet-cifar100-110L-lr0_02

python cifar.py -a resnet --dataset cifar10 --depth 110 --lr 0.05 --epochs 164 --
schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint
optional_1_results/cifar10/part_1/resnet-cifar10-110L-lr0_05

python cifar.py -a resnet --dataset cifar100 --depth 110 --lr 0.05 --epochs 164 --
schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint
optional_1_results/cifar100/part_1/resnet-cifar100-110L-lr0_05

python cifar.py -a resnet --depth 20 --epochs 328 --schedule 162 244 --gamma 0.1
--wd 1e-4 --checkpoint optional_1_results/cifar10/part_2/20

python cifar.py -a resnet --depth 56 --epochs 328 --schedule 162 244 --gamma 0.1
--wd 1e-4 --checkpoint optional_1_results/cifar10/part_2/56

python cifar.py -a resnet --depth 110 --epochs 328 --schedule 162 244 --gamma 0.1
--wd 1e-4 --checkpoint optional_1_results/cifar10/part_2/110

python cifar.py -a resnet --dataset cifar100 --depth 20 --epochs 82 --schedule 41 61
--gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_2/20

python cifar.py -a resnet --dataset cifar100 --depth 56 --epochs 82 --schedule 41 61
--gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_2/56

python cifar.py -a resnet --dataset cifar100 --depth 110 --epochs 82 --schedule 41
61 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_2/110
```

optional 2:

python cifar_optional_1_3-1.2.py -a resnet --depth 56 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_3/resnet-cifar10-56L-1.2

python cifar_optional_1_3-1.2.py -a resnet --depth 110 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_3/resnet-cifar10-110L-1.2

python cifar_optional_1_3-1.5.py -a resnet --dataset cifar100 --depth 56 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_3/resnet-cifar100-56L-1.5

python cifar_optional_1_3-1.5.py -a resnet --dataset cifar100 --depth 110 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_3/resnet-cifar100-110L-1.5

python cifar.py -a resnet --depth 56 --train-batch 256 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_3/resnet-cifar10-56L-batch-256

python cifar.py -a resnet --depth 110 --train-batch 256 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar10/part_3/resnet-cifar10-110L-batch-256

python cifar.py -a resnet --dataset cifar100 --depth 56 --train-batch 64 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_3/resnet-cifar100-56L-batch-64

python cifar.py -a resnet --dataset cifar100 --depth 110 --train-batch 64 --epochs 164 --schedule 81 122 --gamma 0.1 --wd 1e-4 --checkpoint optional_1_results/cifar100/part_3/resnet-cifar100-110L-batch-64