가장 성능이 좋았던 모델

Model: resnet152

optimizer : SGD with momentum and scheduler

Data Augmentation : RandomResizedCrop, RandomHorizontalFlip

Data Normalize

Hyperparameter Setting

- learning\_rate = 0.001

- training\_epochs = 50

- batch\_size = 32

- momentum = 0.9

- scheduler\_step = 1

- scheduler\_gamma = 0.96

**Mean Accuracy : 91.17**

**평가: layer가 얕은 모델에 다양한 기법(weight decay등) 을 사용해보았지만, 다른 기법을 사용하지 않은 가장 깊은 layer를 가진 resnet152 모델이 가장 좋은 성능을 보인다.**

# 1

Model : resnet18

regularization : dropout

optimizer : SGD with momentum and scheduler

Hyperparameter Setting

* learning\_rate = 1e-2
* training\_epochs = 50
* batch\_size = 64
* momentum = 0.9
* dropout\_rate = .4
* scheduler\_step = 2
* scheduler\_gamma = 0.9

**Mean Accuracy : 82.51**

#2

기존 #1에 아래 사항 추가

* Data Augmentation(RandomResizedCrop, RandomHorizontalFlip)
* Data Normalize

**Mean Accuracy : 87.29**

#3

기존 #2에 아래 사항 추가

* Data Augmentation(rotation, affine, colorjitter)

**Mean Accuracy : 79.03**

#4

기존 #2에 아래 사항 추가

* regularization(weight decay: 5e-4)

**Mean Accuracy : 77.82**

#5

Model : wide resnet 50-2

optimizer : SGD with momentum and scheduler

Data Augmentation : RandomResizedCrop, RandomHorizontalFlip

Data Normalize

Hyperparameter Setting

* learning\_rate = 0.1
* scheduler\_step = 30
* scheduler\_gamma = 0.2
* training\_epochs = 100
* batch\_size = 32
* momentum = 0.9
* dropout\_rate = 0.3

**Mean Accuracy : 82.38**

# 6

Model: resnet152

optimizer : SGD with momentum and scheduler

Data Augmentation : RandomResizedCrop, RandomHorizontalFlip

Data Normalize

Hyperparameter Setting

* learning\_rate = 0.001
* training\_epochs = 100
* batch\_size = 16
* momentum = 0.9
* scheduler\_step = 1
* scheduler\_gamma = 0.99

**Mean Accuracy : 90.08**

# 7

Model: resnet152

optimizer : SGD with momentum and scheduler

Data Augmentation : RandomResizedCrop, RandomHorizontalFlip

Data Normalize

Hyperparameter Setting

* learning\_rate = 0.001
* training\_epochs = 50
* batch\_size = 32
* momentum = 0.9
* scheduler\_step = 1
* scheduler\_gamma = 0.96

**Mean Accuracy : 91.17**