Enviroment:

Python: 3.8

Pytorch: 1.9.1

Pandas: 1.5.0

Matplotlib: 3.6.0

Scikit-image: 0.19.2

Torchsummary: 1.5.1

Report

在 python 執行 test.py，predict 的結果會寫入 csv。

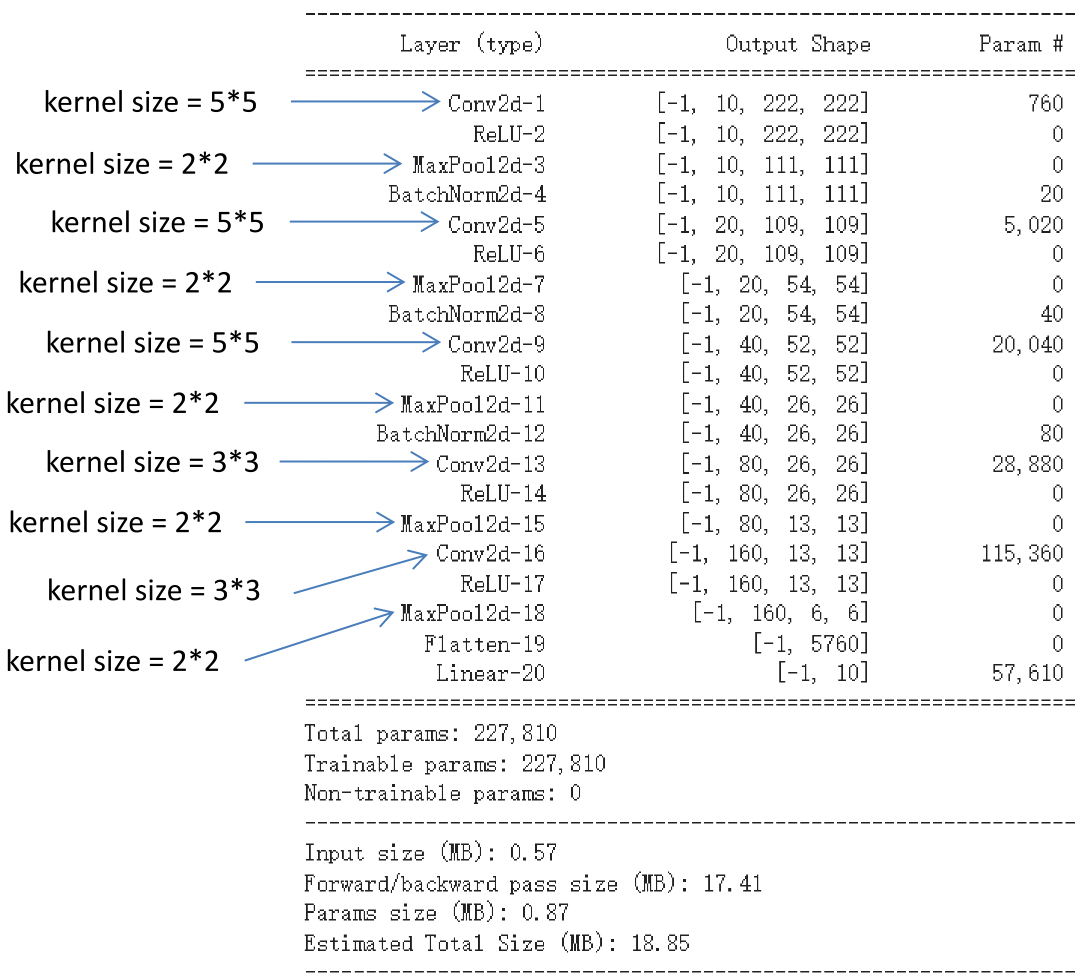
Number of Model parameters = 227,810

Model structure:

input shape = [-1, 3,224,224]

output shape of layer= [-1, output_channels, image_width, image_width]

input_channels = 上一層的 output_channels



kernel size = 5*5

kernel size = 2*2

kernel size = 5*5

kernel size = 2*2

kernel size = 5*5

kernel size = 2*2

kernel size = 3*3

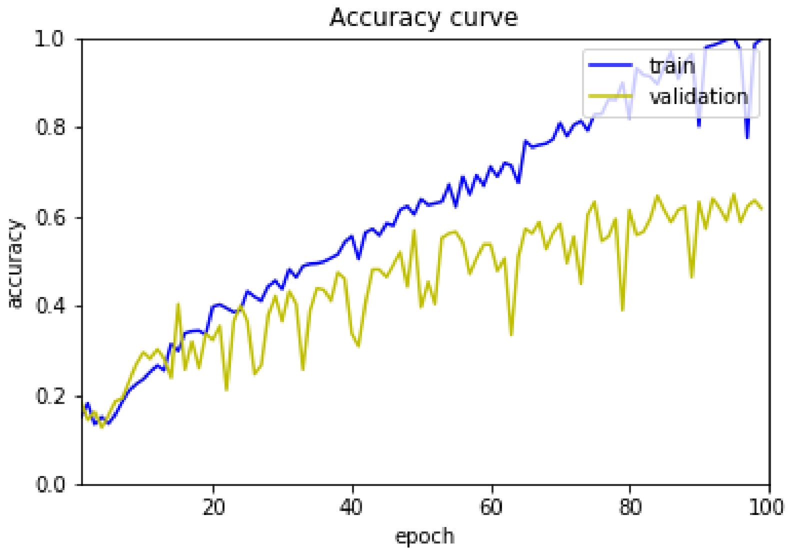
kernel size = 2*2

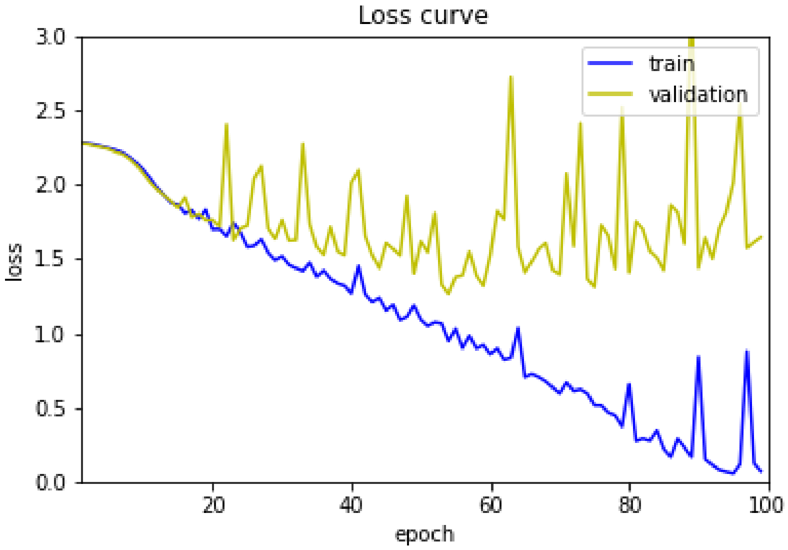
kernel size = 3*3

kernel size = 2*2

```
----------------------------------------------------------------
        Layer (type)               Output Shape         Param #
================================================================
            Conv2d-1         [-1, 10, 222, 222]             760
              ReLU-2         [-1, 10, 222, 222]               0
         MaxPool2d-3         [-1, 10, 111, 111]               0
       BatchNorm2d-4         [-1, 10, 111, 111]              20
            Conv2d-5         [-1, 20, 109, 109]           5,020
              ReLU-6         [-1, 20, 109, 109]               0
         MaxPool2d-7           [-1, 20, 54, 54]               0
       BatchNorm2d-8           [-1, 20, 54, 54]              40
            Conv2d-9           [-1, 40, 52, 52]          20,040
             ReLU-10           [-1, 40, 52, 52]               0
        MaxPool2d-11           [-1, 40, 26, 26]               0
      BatchNorm2d-12           [-1, 40, 26, 26]              80
           Conv2d-13           [-1, 80, 26, 26]          28,880
             ReLU-14           [-1, 80, 26, 26]               0
        MaxPool2d-15           [-1, 80, 13, 13]               0
           Conv2d-16          [-1, 160, 13, 13]         115,360
             ReLU-17          [-1, 160, 13, 13]               0
        MaxPool2d-18            [-1, 160, 6, 6]               0
          Flatten-19                 [-1, 5760]               0
           Linear-20                   [-1, 10]          57,610
================================================================
Total params: 227,810
Trainable params: 227,810
Non-trainable params: 0
----------------------------------------------------------------
Input size (MB): 0.57
Forward/backward pass size (MB): 17.41
Params size (MB): 0.87
Estimated Total Size (MB): 18.85
----------------------------------------------------------------
```

Result





Problem:

驗證集的 loss 居高不下，原本懷疑是因為 normalization 導致 overfitting，但是刪除後不僅沒有下降，反而使 accuracy 大幅下降。