**Computer Vision HW2 Report**

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Name: xxx

**Part 1. (10%)**

**• Plot confusion matrix of two settings. (i.e. Bag of sift and tiny image) (5%)**

**Ans:**

**• Compare the results/accuracy of both settings and explain the result. (5%)Ans:**

**Part 2. (25%)**

**• Report accuracy of both models on the validation set. (2%)**

**Ans:**

|  |  |
| --- | --- |
| MyNet Validation Set Accuracy | ResNet Validation Set Accuracy |
| 0.8518 | 0.8328 |

**• Print the network architecture & number of parameters of both models. What is the main difference between ResNet and other CNN architectures? (5%)**

**Ans:**

**• Plot four learning curves (loss & accuracy) of the training process (train/validation) for both models. Total 8 plots. (8%)**

**Ans:**

|  |  |
| --- | --- |
| MyNet | |
| Train Accuracy | Train Loss |
|  |  |
| Validation Accuracy | Validation Loss |
|  |  |

|  |  |
| --- | --- |
| ResNet | |
| Train Accuracy | Train Loss |
|  |  |
| Validation Accuracy | Validation Loss |
|  |  |

**• Briefly describe what method do you apply on your best model? (e.g. data augmentation, model architecture, loss function, etc) (10%)**

**Ans:**

Data Augmentation: 我先移除sample code中的Resize((32, 32))，並以RandomCrop((32, 32), padding = 4)代替。接下來再對圖片做RandomHorizontalFlip(0.5)

Model: 我的架構為一直做Conv2d=>BatchNorm2d=>ReLU，有時候會接著做MaxPool2d，反覆數次之後會對結果做AvgPool2d，最後再Flatten=>Linear產出分類

Loss Function: 仍然使用CrossEntropyLoss並無更動

Others: 我將batch加大為64會有較好的學習效果