**ASSIGNMENT 1**

**Problem 2**

Part B

Discuss at-least 3 experiments with different parameters and your best model. Also comment on which parameters you thought helped better accuracy compared to that of the base case.

We created three configuration files of format .ini. The first file has the following parameters,

1. Filename: configuration-base.ini

batch\_size = 32

num\_classes = 10

epochs = 100

data\_augmentation = True

num\_predictions = 20

Reading parameters from base file test accuracy is 78%. Shows that it is a good model.

1. Filename: configuration-1.ini

batch\_size = 64

num\_classes = 10

epochs = 100

data\_augmentation = True

num\_predictions = 10

Accuracy is even better with this set of parameters 81%. There is no major difference in train and test accuracies which shows that model has learnt well.

1. Filename: configuration-2.ini

batch\_size = 128

num\_classes = 10

epochs = 200

data\_augmentation = True

num\_predictions = 20

Test accuracy is better with this set of parameters, 84% and the model has learnt well.

1. Filename: configuration-3.ini

batch\_size = 256

num\_classes = 10

epochs = 100

data\_augmentation = False

num\_predictions = 20

The model gives a lower accuracy of 79%.

**Conclusion:** By far, the best model is the one with configuration-2.ini.