

Assignment 3

USAMA KHALID

19I-1236

MS(DS)-B

1. **What architecture and hyper parameters did you use for the final model? What other architectures did you try?**

I used a neural network with 3 hidden layers, ReLU functions between layers and

a sigmoid function at the output.

The hyper parameters for the final model were:

learning rate: 4

max\_epochs: 5000

The other architectures I tried included only input and output layers with no hidden layers and the current architecture with sigmoid replaced with ReLU and Leaky ReLU.

The architectures with ReLU had large RMSE therefore they weren’t used.

1. **What was the cross-validation RMSE? Take at least 5-runs and report the mean and standard deviation of the RMSE.**

Cross validation RMSE:

Mean: 6.66

Standard Deviation: 0.4630334761

1. **What test RMSE are you expecting?**

An RMSE value around 80% because the results on testing data were around this value.