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Section: A

Report

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Question1:

What architecture and hyperparameters did you use for the final model? What other architectures did you try?

I have tried out feed forward neural network and deep neural network and I have used deep neural network for training my model. Network contained 3 hidden layers in linier and nonlinear fashion

Function mentioned below allow us small non-zero gradient when unit is not active. Alpha is the parameter in this case.

Learning rate for optimizer is 0.05.

```
torch.nn.Linear(8, 200),
torch.nn.LeakyReLU(),
torch.nn.Linear(200, 100),
torch.nn.LeakyReLU(),
torch.nn.Linear(100,1),
```

Question2:

What was the cross-validation RMSE? Note: Multiple training cycles in neural networks can result in different final model weights and hence different predictions. Take at least 5-runs and report the mean and standard deviation of the RMSE.

The value of RMSE IS: 18.50

Training cycles	Mean	Standard deviation
1000	27.30377	141.83
3000	17.97	51.71
5000	18.50	73.47
7000	17.10	35.00
10000	17.16	38.17

Question3:

What test RMSE are you expecting?

Around 0.35