1.What is the optimal value of alpha for ridge and lasso regression? What will be the changes in the model if you choose double the value of alpha for both ridge and lasso? What will be the most important predictor variables after the change is implemented?

Optimal value of alpha for ridge:0.4 and lasso: 0.0001

Most important predictor variables:

['OverallQual', 'BsmtFinSF1', '1stFlrSF', '2ndFlrSF', 'Condition2\_PosN',

'RoofMatl\_CompShg', 'RoofMatl\_Membran', 'RoofMatl\_Metal',

'RoofMatl\_Roll', 'RoofMatl\_Tar&Grv', 'RoofMatl\_WdShake',

'RoofMatl\_WdShngl', 'Heating\_OthW', 'Functional\_Sev']

2. You have determined the optimal value of lambda for ridge and lasso regression during the assignment. Now, which one will you choose to apply and why?

Optimal value of alpha for ridge:0.4 and lasso: 0.0001, I’ll go with lasso because it has large set of featues are there so when we came into large data lasso will perform better

3. After building the model, you realised that the five most important predictor variables in the lasso model are not available in the incoming data. You will now have to create another model excluding the five most important predictor variables. Which are the five most important predictor variables now?

If data not available will try to add data using statistical techniques other wise will try to build the new model with new features

4 How can you make sure that a model is robust and generalisable? What are the implications of the same for the accuracy of the model and why?

>Will use minimal features and does not build complex model try to build simpler model

>will check bial and variance tradeoff and also will check precision\_recall tradeoff

> use regularization techniques and scaling the values.