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?

Answer:

- Optimal value for Ridge is 8.0 and Lasso is 0.0001.
- Doubling the alpha will make the coefficients into half.
- The most important predictor variables are SaleCondition columns after the implementation.

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?

Answer:

- I will choose Ridge. Because, the r2_score of Ridge for test data is higher than the Lasso.

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?

Answer:

- OverallQual, GrLivArea, OverallCond, TotalBsmtSF and LotArea are 5 important predictor variables.

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?

Answer:

- The Model should be evaluated properly in order to get the train and test accuracy almost equal.
- Increasing the value of Alpha reduces the coefficient.