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 of alpha for ridge regression is 0.01
Optimal value of alpha for lasso regression is 0.08

If we choose to double, in case of ridge that will lower the coefficients and in case of lasso there would be more less important features coefficients tuning 0.

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: We can go with Ridge Regression. As it has good scores for train and test and lesser important features became almost equal to 0.

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:

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:
1.Remove the outliers.
2.Transform your data
3.Use a model that is resistant to outliers