

Question 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?

The optimal value of alpha for both ridge and lasso has come out to be one, and also out of these the best performing model is that of ridge. If the value is doubled, the coefficients will have to be decreased accordingly otherwise it may lead to the state of underfitting

Question 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?

Yes, even though the value has come out to be same for both of them, ridge has outperformed lasso in terms of the rsquare obtained.

Question 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?

The model can be made robust by making the model through various hyper-parameters and training it on different subsets of data so that it's able to generalise well
This would increase the overall accuracy of the model.