

- a. 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?
  - i. Optimum alpha value for ridge regression is 18.0 because it giving us minimum RMSE and rss values
  - ii. Optimum alpha value for lasso regression is 0.002
  - iii. After doubling the values of alpha R square value and RMSE value is almost same for both alphas
  
- b. 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?
  - i. We need to use lasso regression with alpha 0.002 because it is giving us optimum Rsquare value and minimum RSME value than ridge regression
- c. 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?
  - i. BsmtFinSF1
  - ii. LotArea
  - iii. BsmtUnfSFy
  - iv. arageArea
  - v. KitchenQua
- d. 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?
  - i. Model should have good accueracy across the different types of datasets .
  - ii. We need to focus more on correlation part of analysis .If it can be optimised then we can generalise the model
  - iii.