

Subjective Questions & Answers

Que1: 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?

Ans: The score of the train and test sets helps us evaluate how well the model performs. Using an alpha value of 10, the evaluation of the model, the train, and test data indicate better performance on the ridge model than on the linear regression model.

For lasso regression, the alpha value is 1. The output is the best cross-validated lambda, which comes out to be 0.001.

If we double the value of alpha, the model should not perform well.

Que2: 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?

Ans: Depending upon the model performance, we can wisely choose the lasso or ridge regression models. In the assignment, we can see most coefficients are zero in the lasso regression. So, we will choose lasso regression.

Que3: 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?

Ans:

Five most important predictor variables after dropping previous 5 predictor variables.

Exterior1st_BrkComm

11stFlrSF

Street_Pave

RoofMatl_Metal

RoofStyle_Shed

Que4: 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?

Ans: We can assure the model robustness and generalisable by checking its performance on both seen and unseen data. That is the model should perform good on training as well as testing data. We can check this by looking at the accuracy of the model. It should be almost similar in both. The model should not overfit or underfit in any case.