Outstanding-Project-1

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Q1. 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 Optimal Value of alpha for Ridge Regression was found to be 1.5 and for Lasso Regression was found to be 2. Since the model was used form sklearn doubling the value of alpha doesn’t have a huge impact due to no limit to number of iterations as it iterates until convergence is reached

Q2. 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. The optimal values for Ridge and Lasso were found and it is found that Ridge performs slightly better than Lasso but Elastic Net performs the best.

Ridge performs better because its penalty term is the square of the weights and since the number of independent labels is high it is intuitional that the result depends on all equally and it is regularised more

Q2. How can you make sure that a model is robust and generalizable? What are the implications of the same for the accuracy of the model and why?

Ans. We can make sure that the model is robust and generalizable by making sure the model doesn’t depend on one any one label too much, this can be done by applying regularization which reduces all parameter weights to be comparable to each other and due to a huge amount of labels changing a couple won’t affect the result drastically