

PS9_{Tao}

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1 Introduction

5. The dimension of my training data is 404/450.

6. The optimal value of lambda is 0.00397. The in-sample RMSE is 0.1624725. The out-of-sample RMSE is 0.2213628.

7. The optimal value of lambda is 0.107. The in-sample RMSE is 0.1572889. The out-of-sample RMSE is 0.1689952.

8. The optimal value of lambda is 0.00583. The optimal value of alpha is 0.0939. The in-sample RMSE is 0.1708592. The out-of-sample RMSE is 0.2192711. The optimal value of a lead me to believe that I should use Lasso regression for this prediction test.

9. Because the data is non-linear, I would not be able to estimate a simple linear regression model. The variance is low in the model. The rank of Bias: ridge regression model greater than elastic net model greater than lasso model.