

PS9<sub>spohn</sub>

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April 2024

## 1 Introduction

After coding the "recipe" the dimensions of housing\_training is 404 observations over 14 variables. This is the same number of variables as the original housing data. However, the housing\_train\_x has 74 variables.

## 2 LASSO

The optimal lambda is 0.005689866. The in sample rmse is 1.964934. The out of sample rmse is 0.170

## 3 Ridge Regression

The optimal lambda is 0.03727594. The in sample rmse is 1.959118 The out of sample rmse is 0.1733747

## 4 Other questions

If there are more columns than rows, than you could still be able to make a linear regression if you employed some methods,like dimension reduction using PCA for example.