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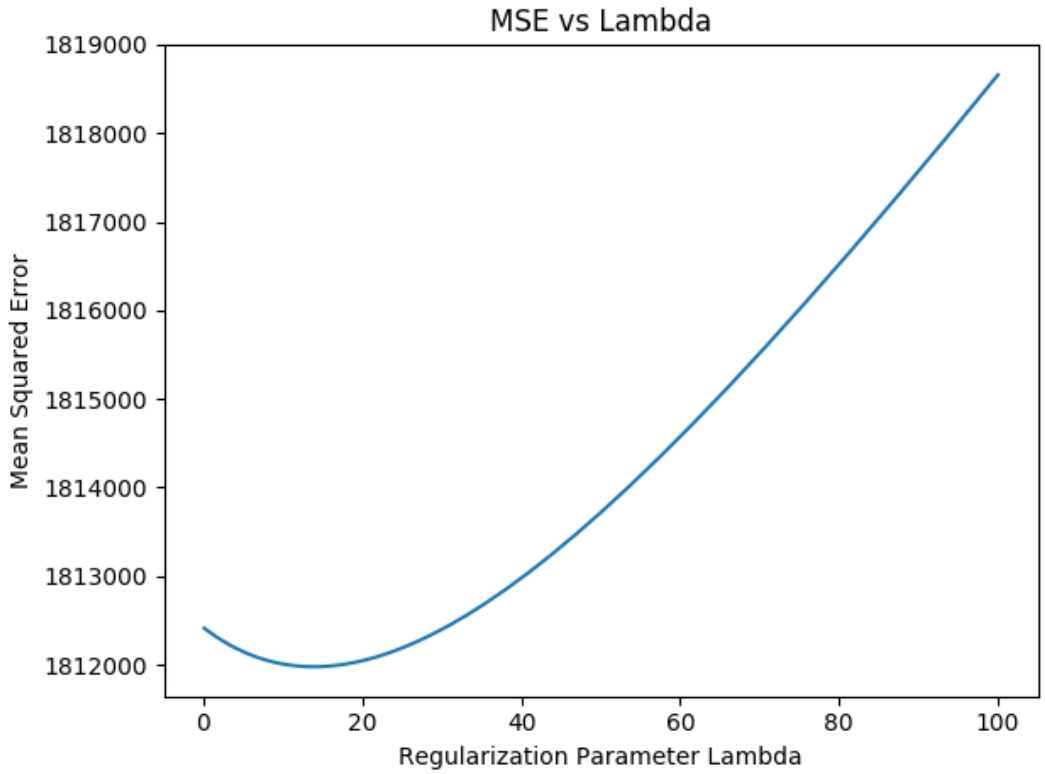
Problem2_writeup

Finding Best Lambda:



Based on the lambda values tested, the best lambda value is 13.4896, which gives an MSE of 1811976.57 as shown.

Equation of best fitted model:

$Y(x) = 5115.65x_1 – 201.498x_2 – 207.154x_3 – 1338.29x_4 + 219.186x_5 – 66.3641x_6 + 500.909x_7 + 74.3062x_8 – 549.072x_9 + 3928.07687554$

The predicted price for a 0.25 carrot, 3 cut, 3 color, 5 clarity, 60 depth, 55 table, 4x, 3y, 2z diamond is 8099.12. This was determined by creating several models from the training partition of the data with different lambda values. And then after determining which model gave the lowest MSE, I used that model to find the value above.