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Professor Fang

COEN 140

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Homework 3

1. **Linear Regression Closed Form**

RMSE of training data: 0.12768967421762198

RMSE of test data: 0.1458346449094983

1. **Ridge Regression Closed Form with K-Fold Cross Validation**

Lambda 400.0: 0.149512776191

Lambda 200.0: 0.140694018453

Lambda 100.0: 0.137276772232

Lambda 50.0: 0.136155943928

Lambda 25.0: 0.135915859199

Lambda 12.5: 0.136022374462

Lambda 6.25: 0.136267864941

Lambda 3.125: 0.136570956936

Lambda 1.5625: 0.136887640732

Lambda 0.78125: 0.137176268069

RMSE of test data: 0.14574650707057937

1. **Linear Regression using Gradient Descent**

RMSE of training data: 0.12769782940027813

RMSE of test data: 0.1458346449094983

1. **Ridge Regression using Gradient Descent**

RMSE of test data: 0.14573620524661535