

## Report

### Project 1: House Price Prediction Abstract

To forecast home sales prices, I developed a machine learning model to predict home sales prices. My lasso regression model received an  $R^2$  of 0.47. In the test set, the  $r^2$  score had a mean squared error of 150344119063.76 and a mean squared error of 187035.39. I specified the house's square footage (sqft living). The data set house data train.csv refers to the actual price of the house. The number of bedrooms in a house is frequently one of the determining factors in its price. Houses with more bedrooms tend to be more expensive than those with fewer bedrooms.

#### Lasso Regression model

I chose to use a lasso regression model to predict house prices because it had the highest  $r^2$  score and the lowest mean square and mean absolute errors. My linear regression model has an  $r^2$  score of 0.47, a mean square error of 150344119063.76 and a mean absolute error of 187035.39.

## Performance testing

Sample testing of my price prediction with using sqft\_living and price of the house

Y[index in array]	Predict Price	Actual Price	Difference of actual price and predict price
0	537900.3137	350000	-187900.3137
1	452040.5234	475000	22959.4766
2	361450.7971	422000	60549.2029

Average error between prediction price and actual price is: -34797.211