Blackrock Real Estate Investment

Cassidy Exum, Data Science Flex

King County

- How can Blackrock make educated purchasing decisions?
- How can Blackrock increase the value of the houses they purchase?
- Find two important variables in house price and make determinations about how we can increase the price of a house
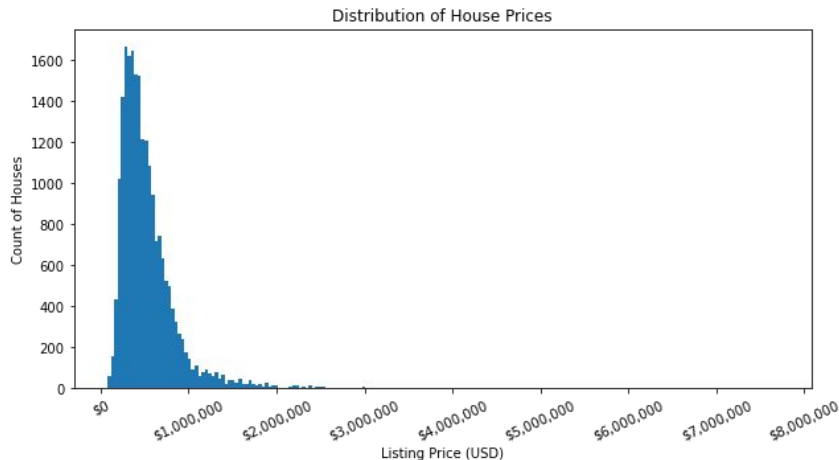

Figure 1:
Distribution of House Prices

Data Correlation

The first thing we looked at was a correlation

heat map to help determine what features to use

Figure 2: Correlation heatmap.
Darker squares are more negative,
brighter squares are more positive

Highly Correlated Features Include:

Square footage of the living space and Grade

Heatmap of Correlation Between Attributes (Including Target)
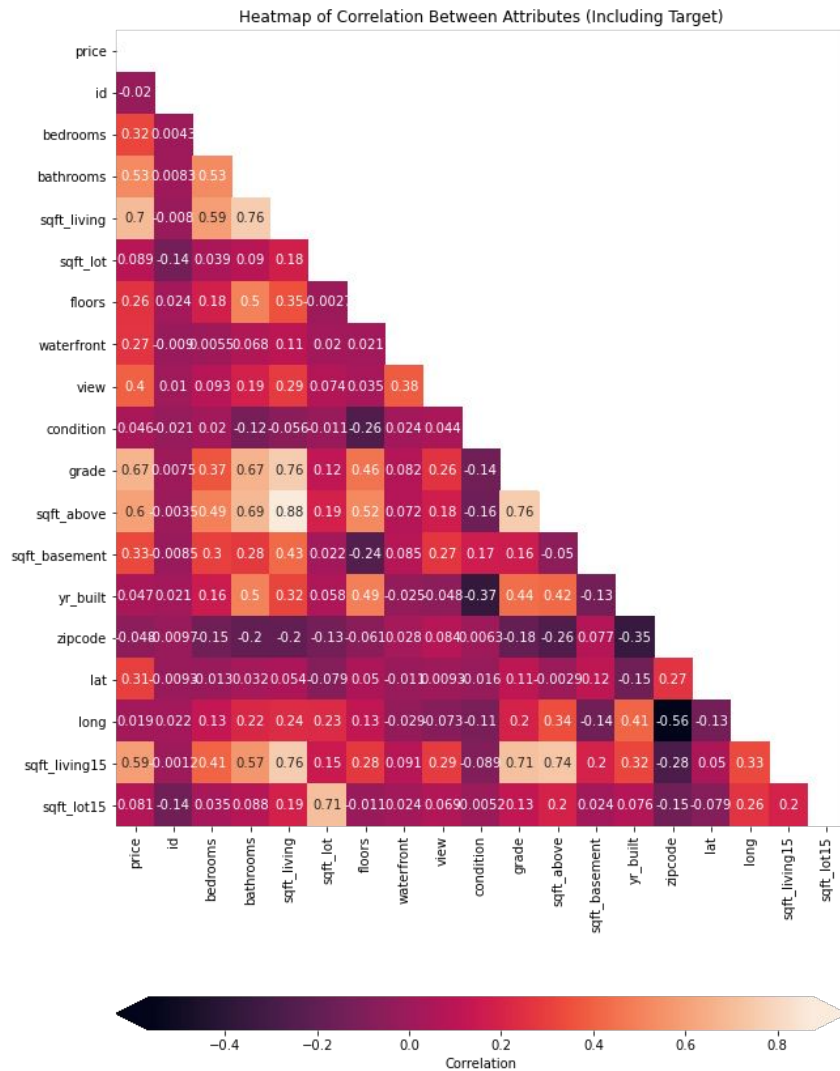
Iterations

Validation Scores for Each Model:
- First Model: 0.49
- Second Model: 0.61
- Third Model: 0.61
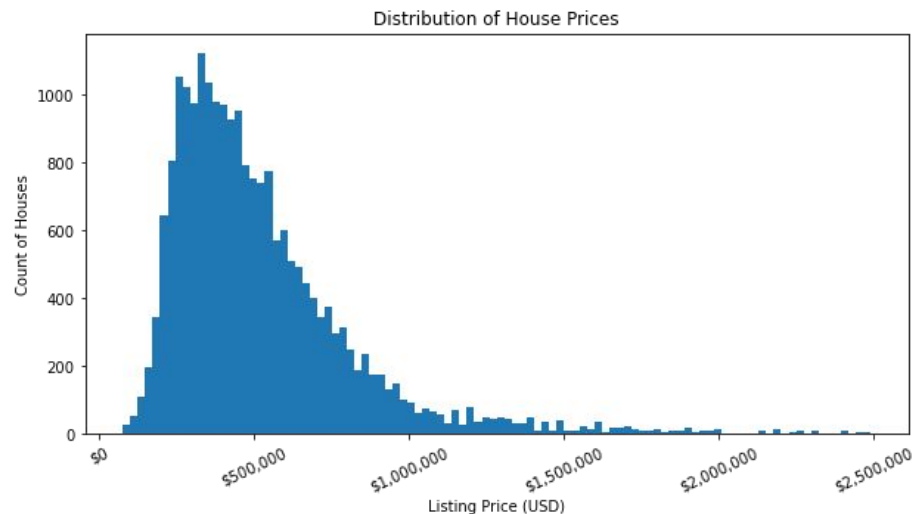- Fourth Model: 0.61

R Squared Values for Each Model:
- First Model: 0.49
- Second Model: 0.61
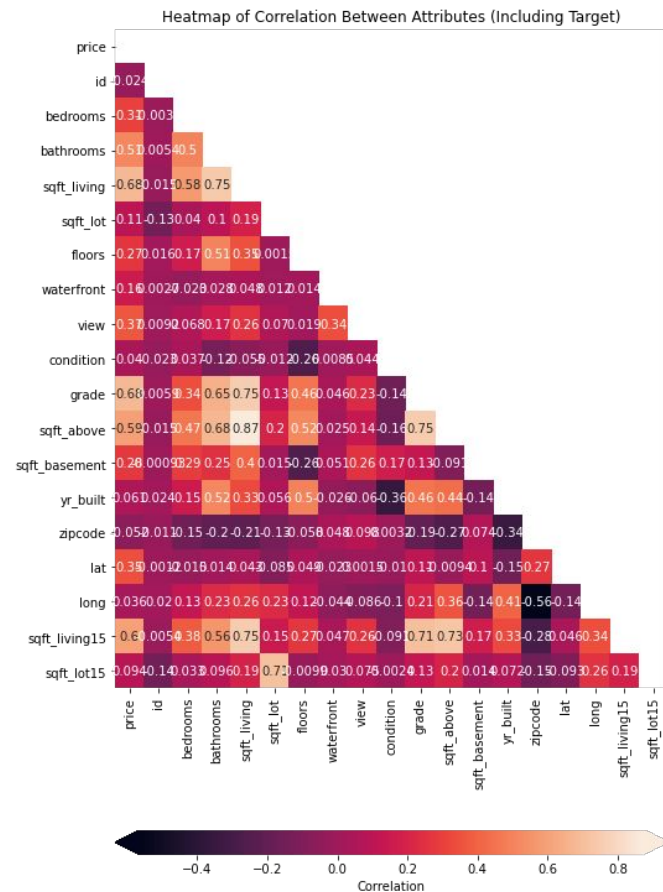- Third Model: 0.61
- Fourth Model: 0.59

Validation Score is the predictive ability of the model

R Squared value represents how well the data fits the model

Data After Adjustment

Distribution of House Prices

Heatmap of Correlation Between Attributes (Including Target)

After adjustment, the data has fewer outliers and should produce better results

Final Model Features and Validation Score

Final Model Validation Score: 0.71   Validation Score is the predictive ability of the
                                                    model

Final Model R Squared Value: 0.72   R Squared value represents how well the
                                                    data fits the model

Two Most Correlated Features: Square Footage of the Living Space and Grade of the House

Selected features: number of bedrooms, number of bathrooms, square footage of the living area, number of floors, year build, zip code, latitude, waterfront view, enhanced view, condition of the house, grade of the house, longitude, square footage of the lot of the nearest 15 neighbors, square footage of the basement, square footage of the lot of the nearest 15 neighbors

Recommendations

Recommendation 1: Increase of the size of the living space. Every 1 square foot you increase the living space, the price will increase by $123.

Recommendation 2: Improve the grade of the house. Every increase in grade will increase the price of the house by $96,752

The best way to accomplish both would be to renovate a section of the house, thus improving the grade and increasing the living space.

Any Questions?

Contact Info:

Cassidy Exum

cassidy.j.exum@gmail.com