King County Real Estate:
Modeling Sale Prices with Multiple Regression

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March 6, 2019

Overview

► This analysis includes 21,597 houses sold in King's County from May 2014 to May 2015.

► Our dataset includes many features of these houses, which I will use to predict sale prices. For example:

    ► Zip Code

    ► Square Footage

    ► Number of Bedrooms

► This model may be useful for King County residents in a number of ways.

    ► House sellers can better determine their list prices

    ► House buyers can better determine how much to offer

    ► Homeowners can understand the potential value of renovations
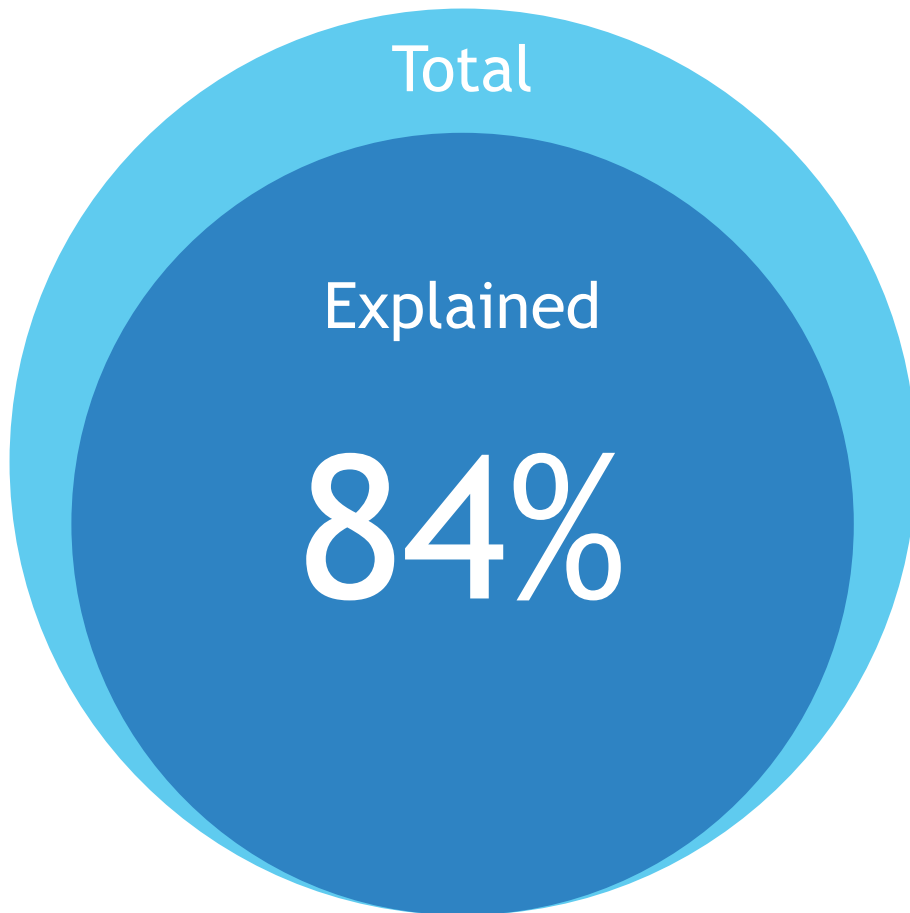
Most Houses Sell for Under $1m, with Some Large Outliers

Distribution of House Sale Prices
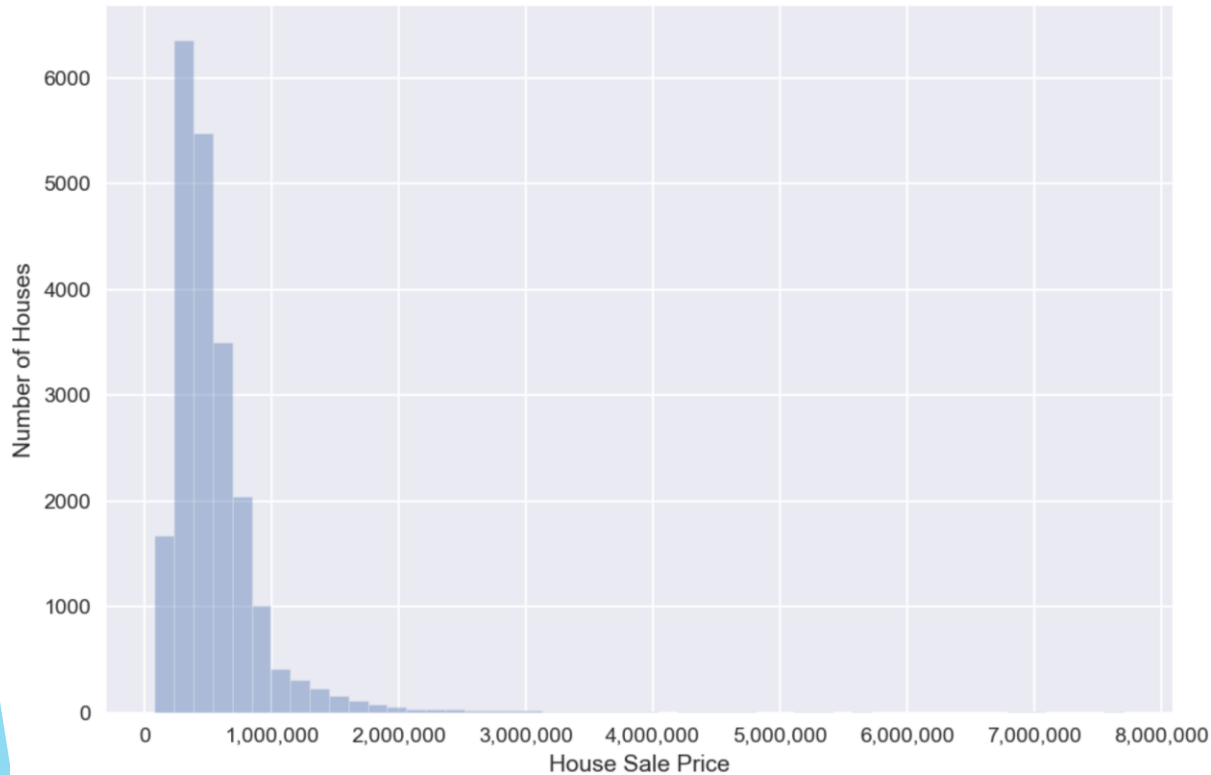
- House sale prices in Kings County range from $78k to $7.7m

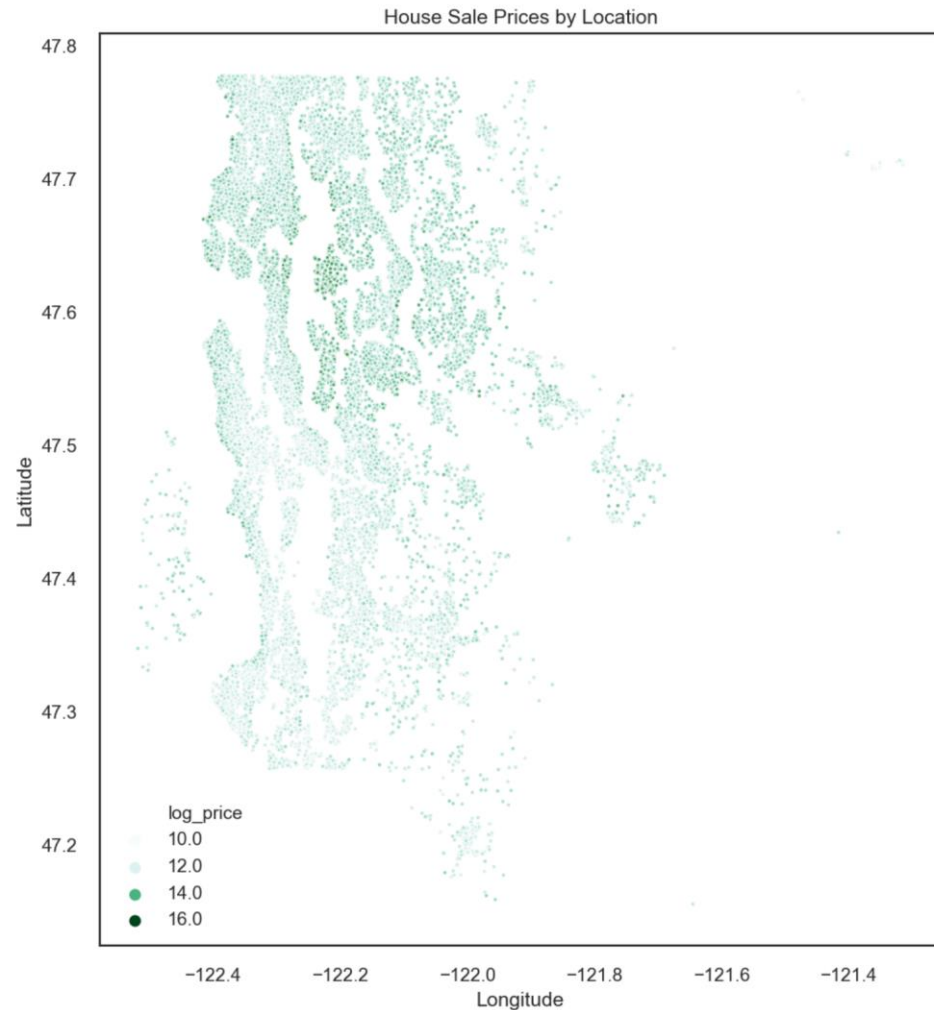- Most houses sell for under $1m, with a median sale price of $450k

Regression Model Explains Most Variation

Variation in House Sale Prices

Total

Explained

84%

▶ The regression model used for this analysis explains 84% of the variation in house sale prices

Location, Location, Location

House Sale Prices by Location
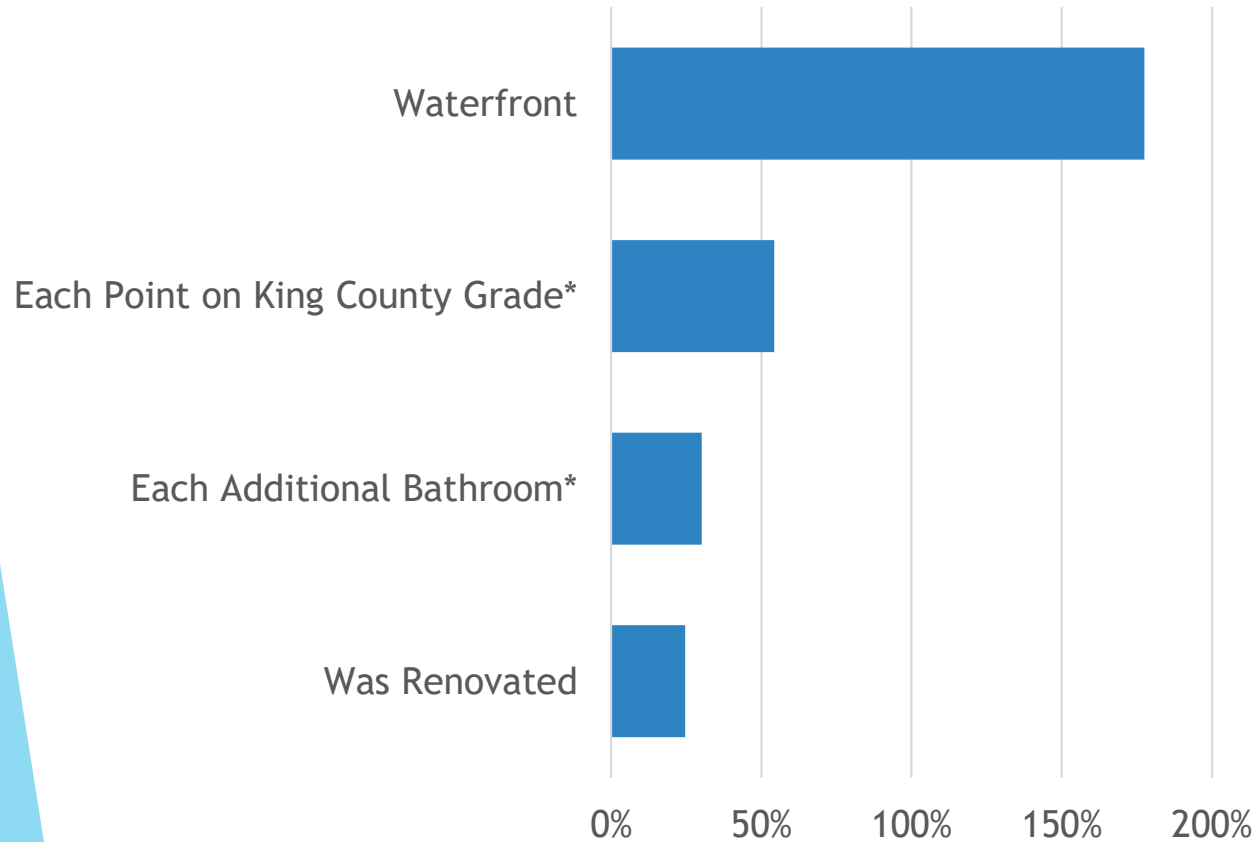
▶ More expensive houses are located toward the middle of King County, or on the waterfront to the west.

Key Features

Sale Price Increase by Feature

- Waterfront
- Each Point on King County Grade*
- Each Additional Bathroom*
- Was Renovated

0%   50%   100%   150%   200%

▶ Waterfront properties are far more valuable than comparable properties not on the water

▶ The King County Grade system is a useful predictor of sales prices

▶ Additional bathrooms increase home values substantially

▶ Renovations can improve house value

* Values are approximate, based on an aggregate of multiple estimates

Summary

- Data available from King County about house sales can be used to predict house prices fairly well.

- Future analyses using more sophisticated modeling approaches may provide even more predictive power.