Predicting House Prices in King County, WA

Estimating with a Data Science Model

Constructing the Model

- Original data contains many available predictors
  - Features
  - Location
  - Quality
- Original data was cleaned up
  - Invalid values
  - Outliers
  - Weak or spurious relationship with price
- Training the model
- Testing the model

The Model

***ln(Y) = 12.2612 + 0.1919 G + 0.0002 *ln(L) - 0.0502 B**

Y = Price
B = Bathrooms
L = Squared Footage of House
G = Grade

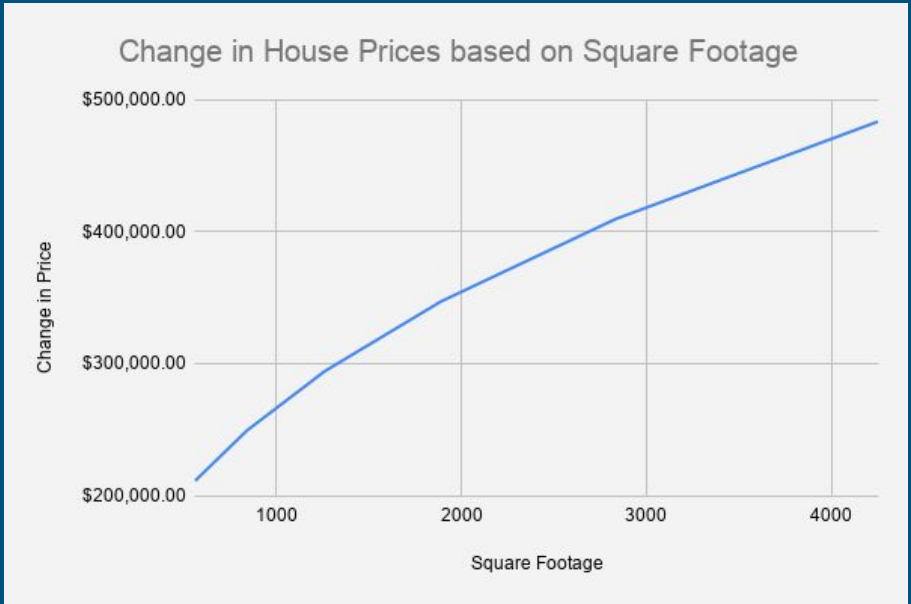
- The predictor variables explain 35% of changes in house prices

** ln = natural log*

Analyzing the Model

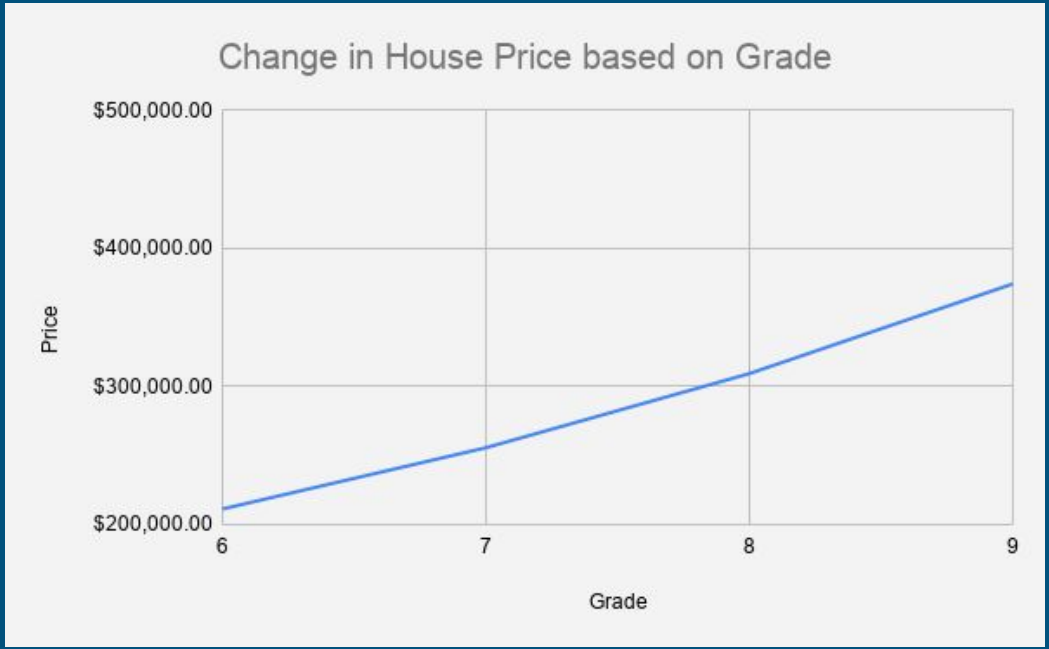
- Average price of employ lots is $211,335
- Square footage of the house impacts the most on the house prices
- Grade of the house is the second most influential factor
- The number of bathrooms contributes the least
    - The number of bathrooms is negatively related to the price

Estimating Price based on Square Footage of the House



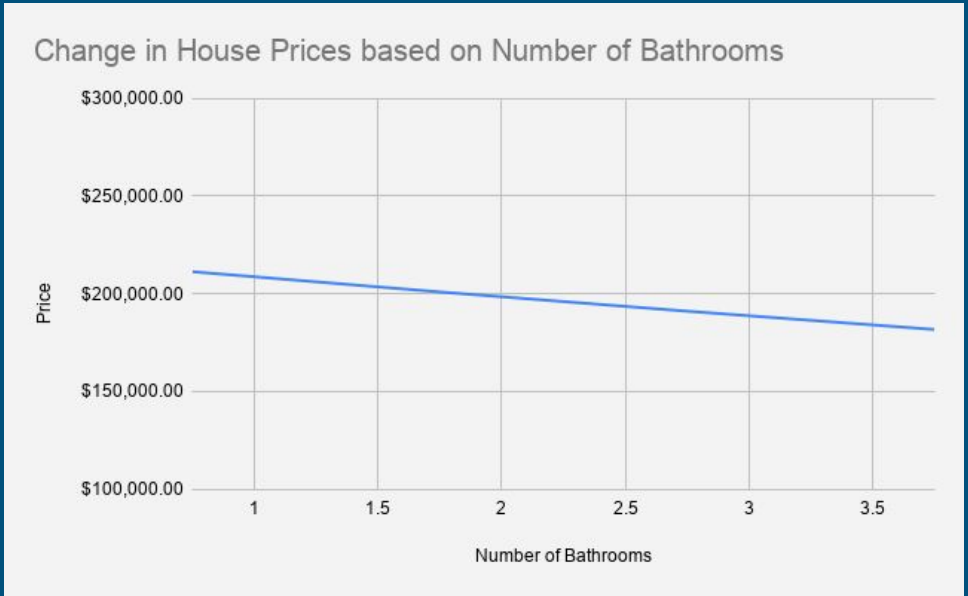
- Price increases by 33% for every 100% square footage increase
- Price increases by 18% for every 50% square footage increase

Estimating Price based on Grade



- Price increases by 21% for every grade increase

Estimating Price based on Number of Bathrooms



- Price decreases by 4.9% for every bathroom added
- The grade and square footage remain fixed

The End