



REALTY KINGS

King County Housing Prices

Linear Regression Analysis

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Our Goal

- Use exploratory data analysis to gain insight into the king county housing market.
- Determine the features of a home that best predict its price.
- Build a model to predict home prices with the best features(predictors).



1. EDA's

EDA's based on our model.

2. Model

We then demonstrate our model using the selected features.

3. Recommendations

Recommendations based on our model.

4. Future Work

What we would like to dive deeper into before building another model.

Exploratory Analysis

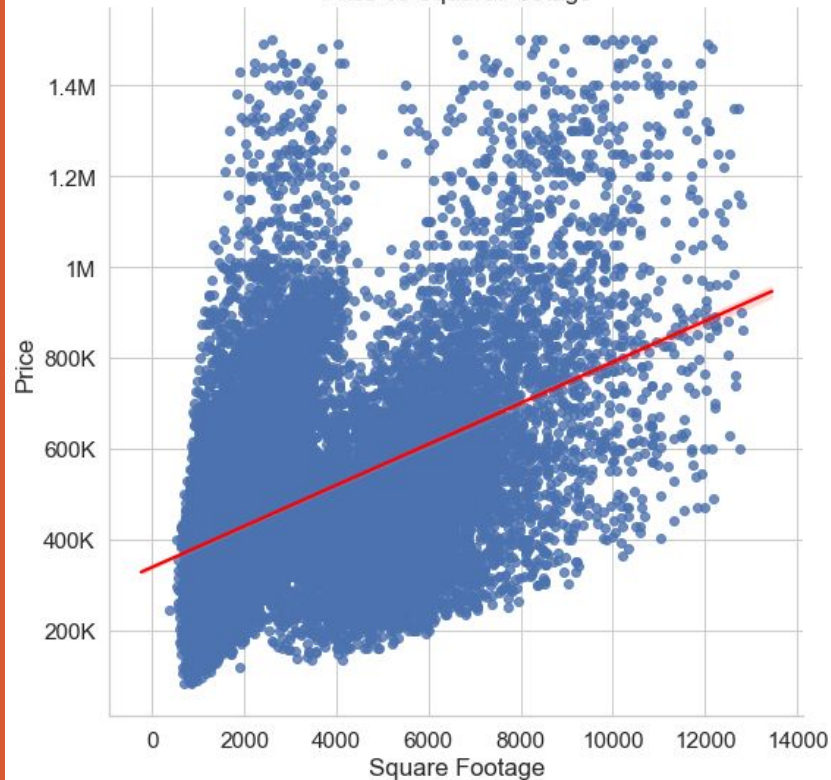
21,597

Properties sold in between 2014 - 2015 for an average price of **\$540,296**

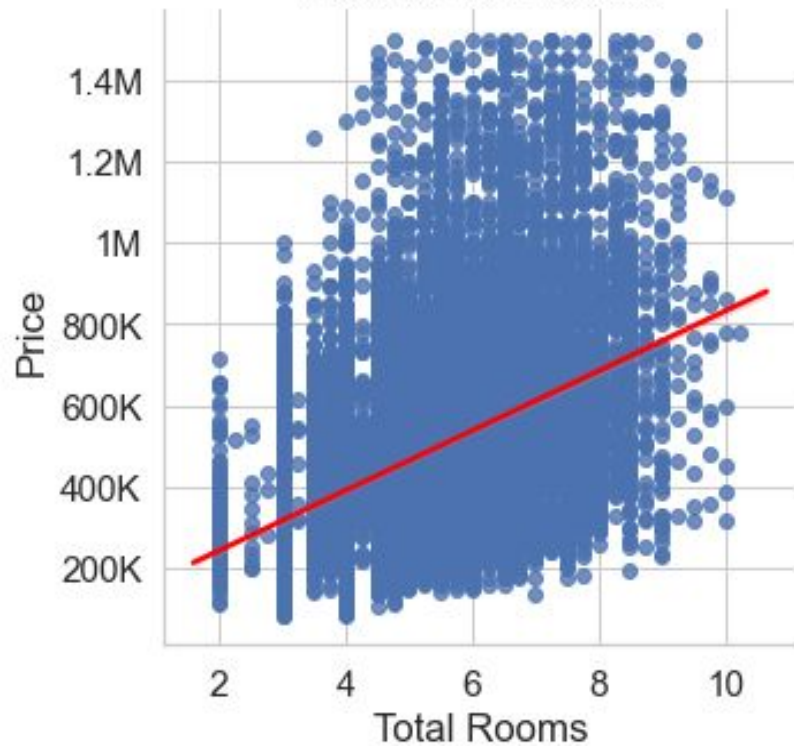


EDA

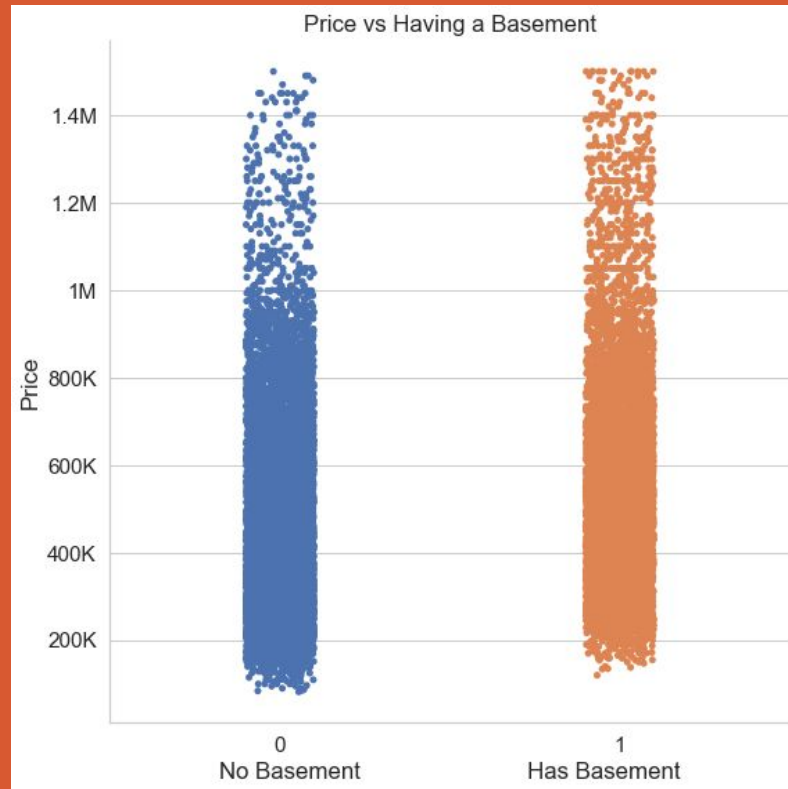
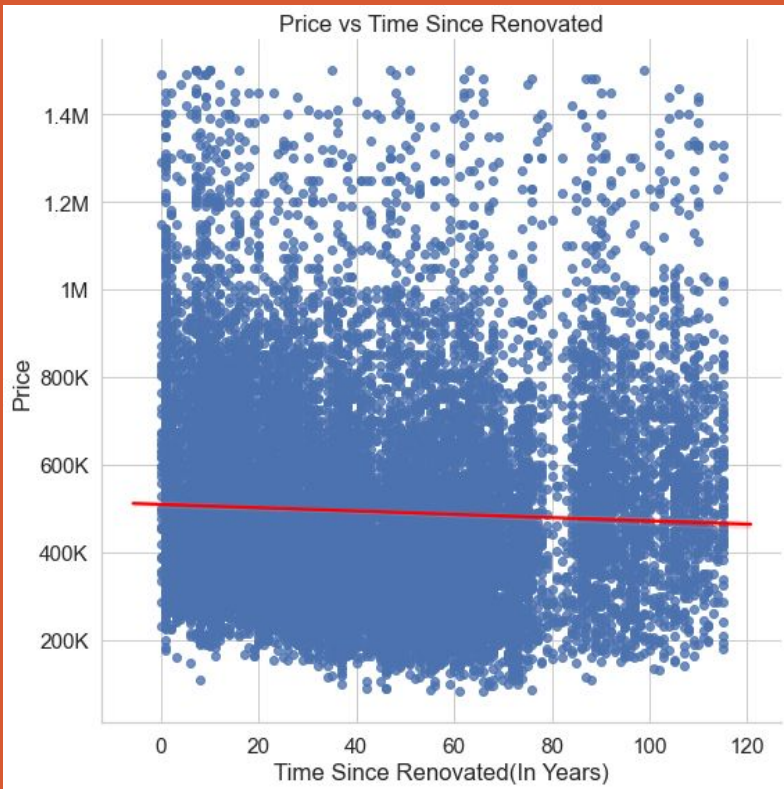
Price vs Square Footage



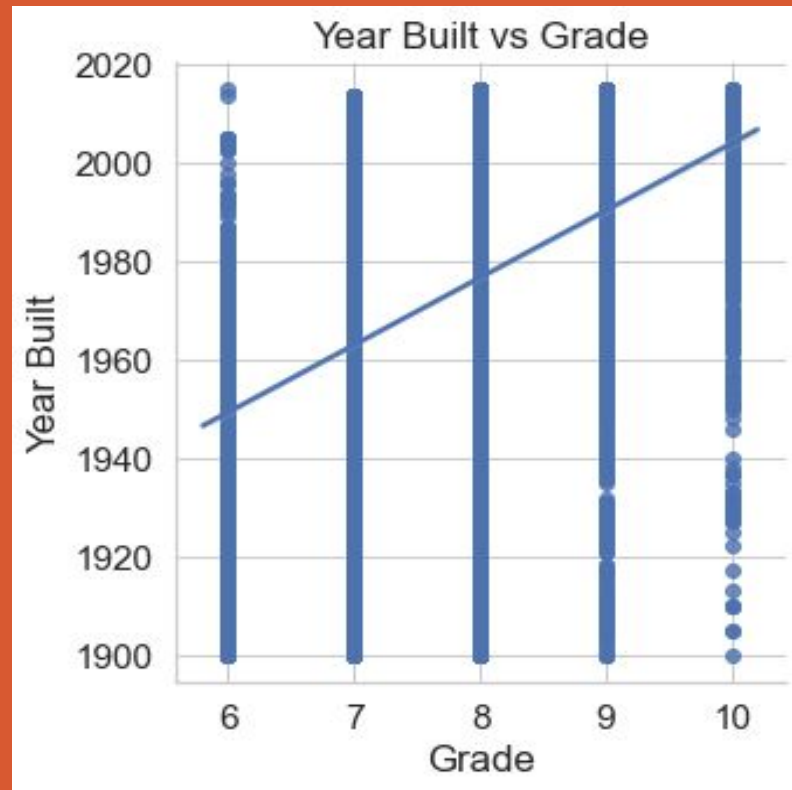
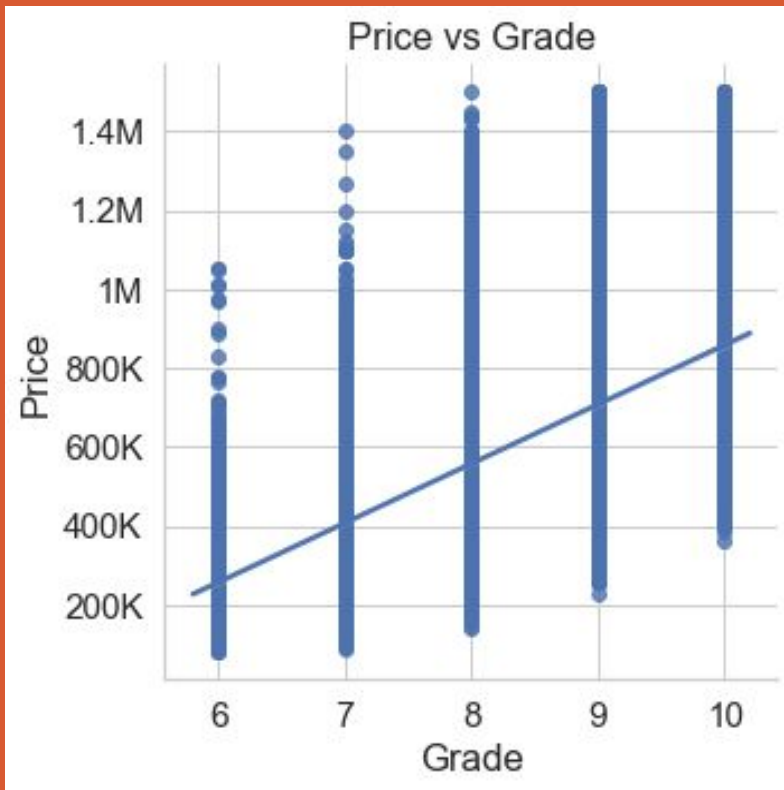
Price vs Total Rooms



EDA

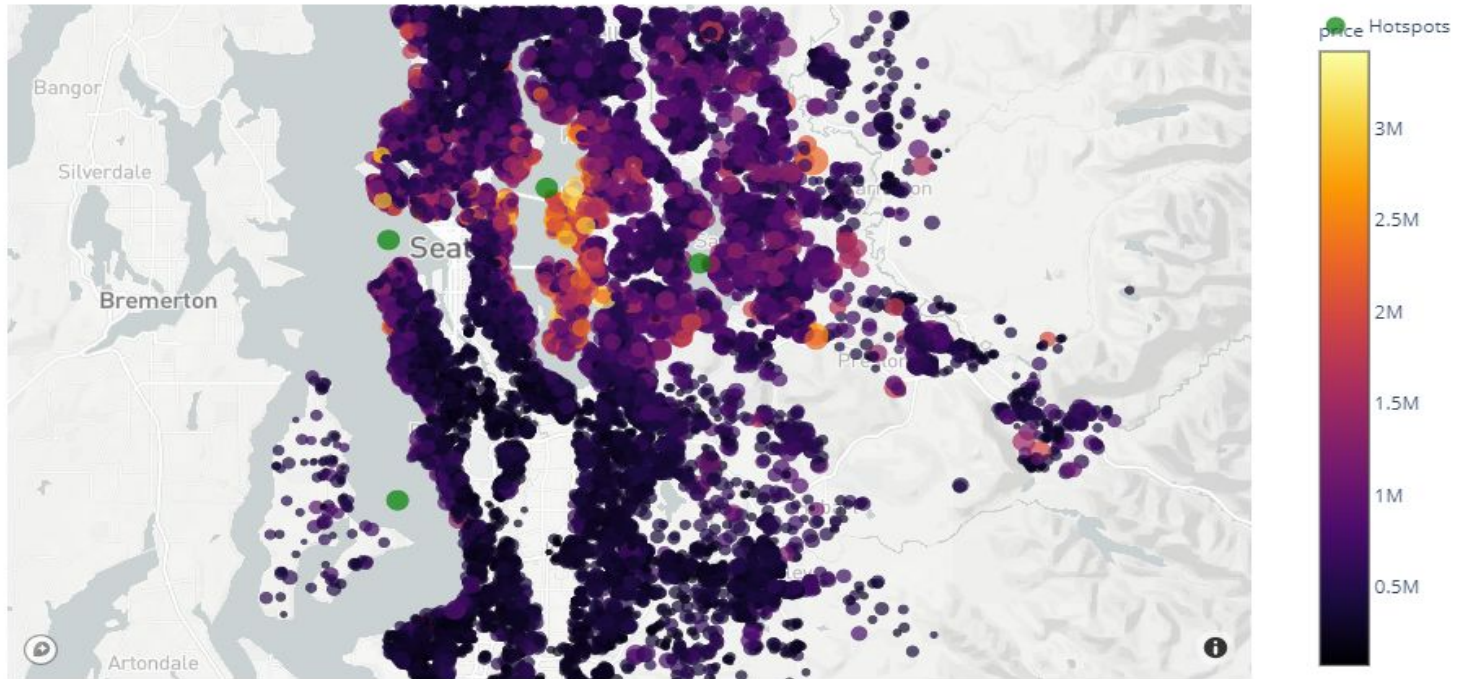


EDA



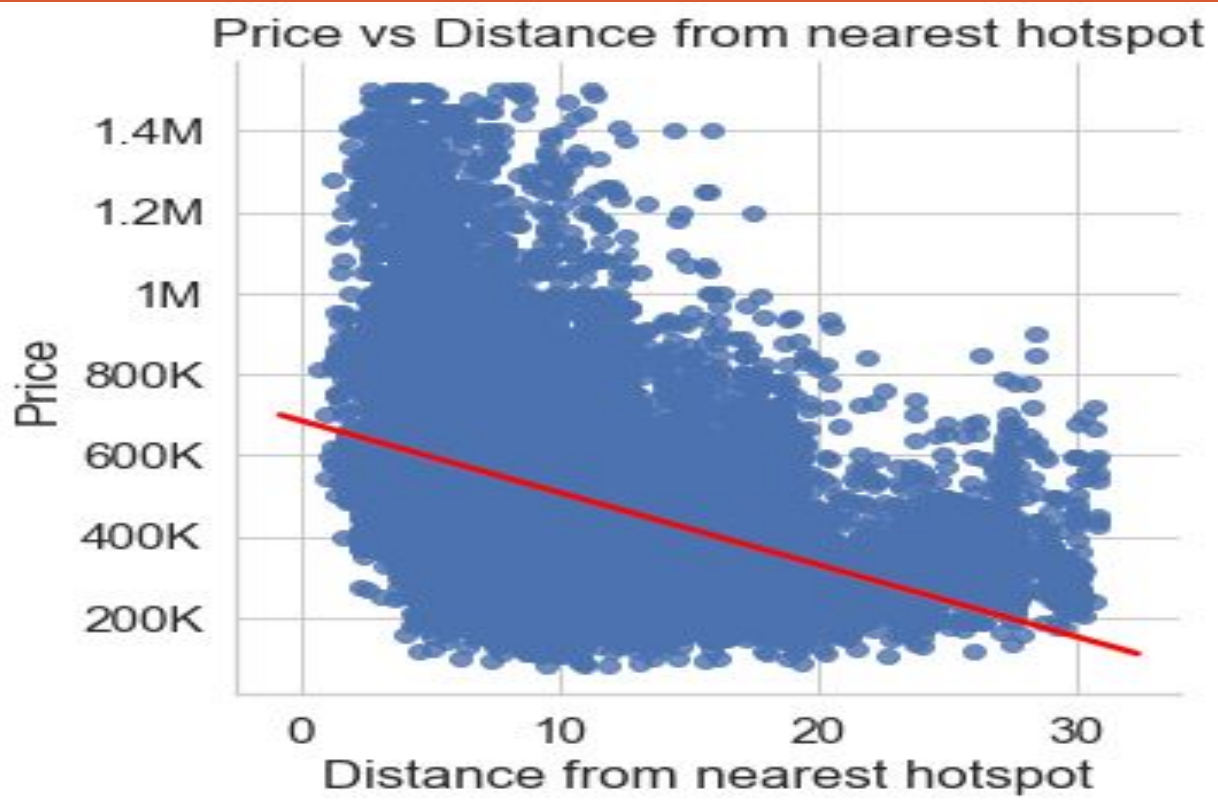


King County Real Estate and Hotspot Locations



So as you can see, the closer a house is to a waterfront, the higher its price will be.

EDA



What Predicts the Price?



BEST MODEL PREDICTORS



Renovation

yes/no * 1.26×10^5

Views

#views * 6.903×10^4

Basement

yes/no * 4.428×10^4

Conditon/Grade²

Meta score² * 3942.97

Time Since Renovation

Time * -291.362

Recommendations





Recommendations

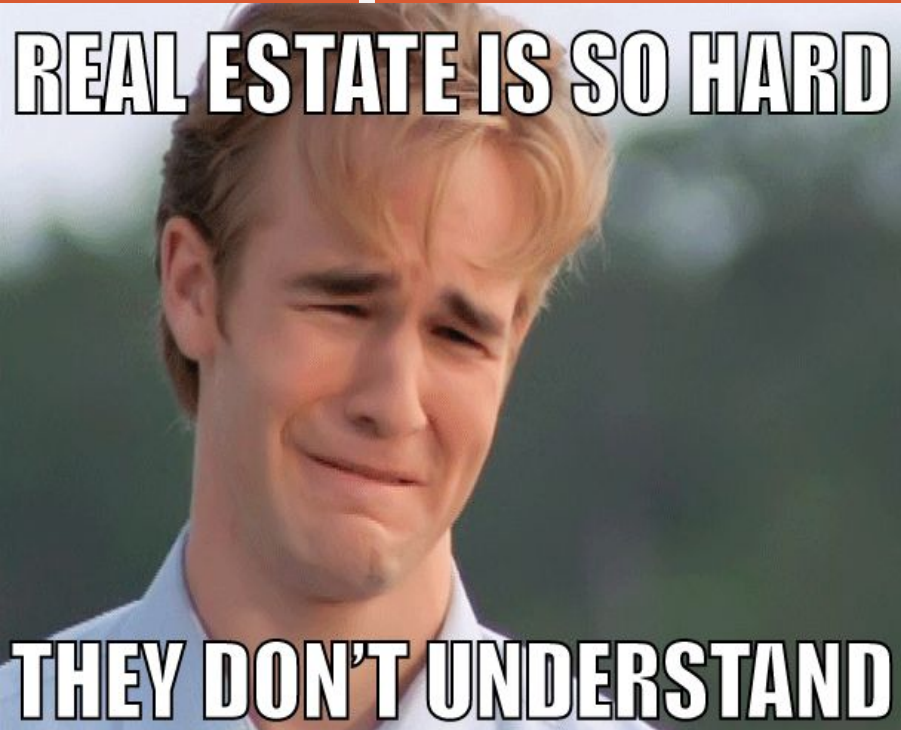
1) Renovation - Make renovations. Renovations will affect grade which in turn affects Price to be higher.

Renovations ~ Grade ~ Price

Renovations ~ No. of rooms ~ Price

2) Views - Increase view count. Higher view count will result in more offers which will potentially increase house value. In Zillow, more view counts results in the property being classified as “hot”.

Future Work



Obtain more diverse data:

- Distance from important areas of note such as:
 - Schools/Colleges
 - Hospitals
 - Major Employers
- Greater range of when houses were sold outside of timeframe provided
- Zip Code and School District investigation
- Frequency of Sale and Prior Sales Prices

Model Refinement with improved accuracy and predictors

OUR TEAM



Payson Chadrow

The probability of this result happening by chance is 0.027. Since $p < 0.5$ i conclude that the sun has exploded

Saif Kasmani

I bet you \$ 50 it hasn't



thank
you

Memes

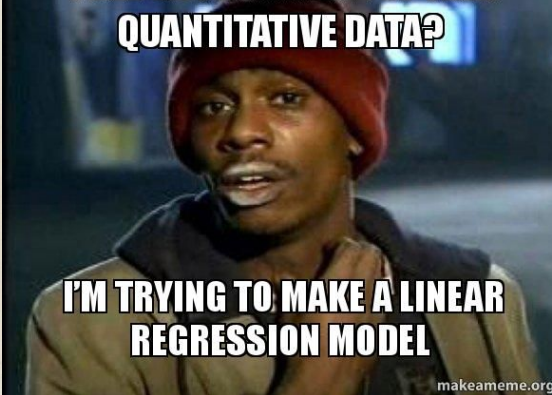
SEES THAT DATA ARE NOT NORMALLY
DISTRIBUTED

RUNS LINEAR REGRESSION
ANYWAY



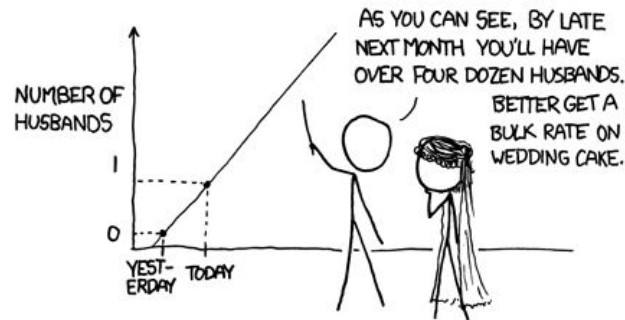
Y'ALL GOT ANYMORE OF THAT
QUANTITATIVE DATA?

I'M TRYING TO MAKE A LINEAR
REGRESSION MODEL



makeameme.org

MY HOBBY: EXTRAPOLATING



THIS IS YOUR MACHINE LEARNING SYSTEM?

YUP! YOU POUR THE DATA INTO THIS BIG
PILE OF LINEAR ALGEBRA, THEN COLLECT
THE ANSWERS ON THE OTHER SIDE.

WHAT IF THE ANSWERS ARE WRONG?

JUST STIR THE PILE UNTIL
THEY START LOOKING RIGHT.

