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

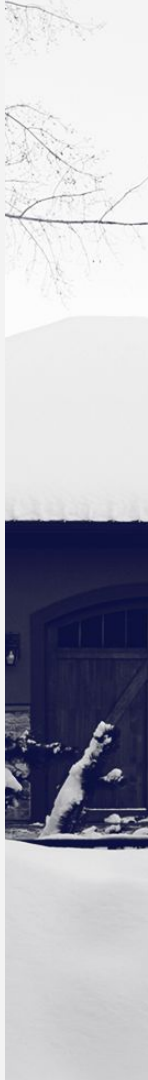
We then demonstrate our model using the selected features.

3. Recommendations

Recommendations based on our model.

4. Future Work

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

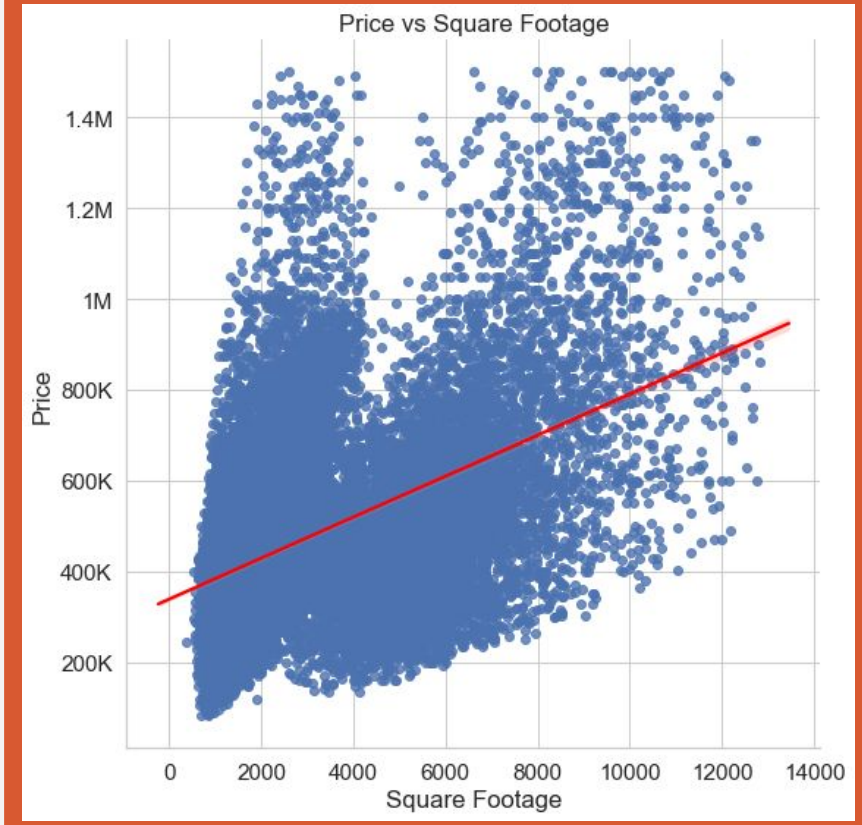


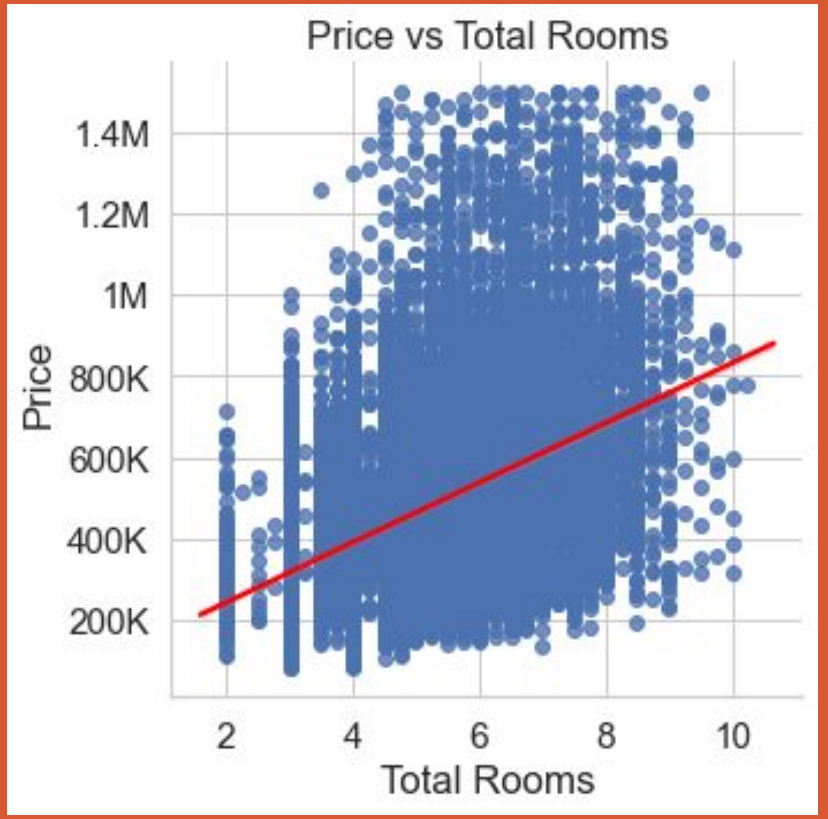
Exploratory Analysis

21,597

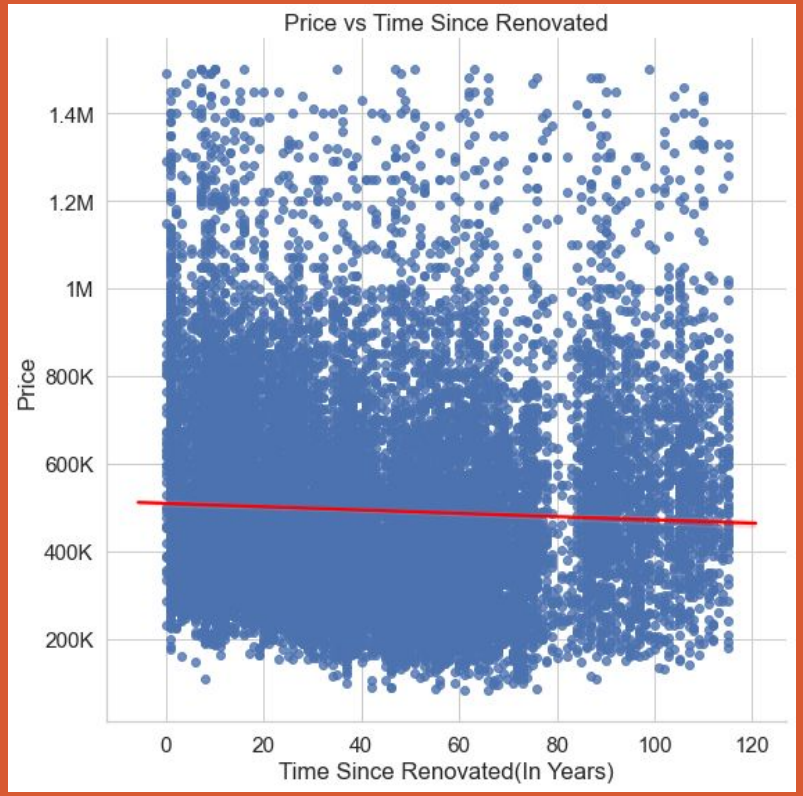
Properties sold in between 2014 - 2015 for an average price of **$540,296**

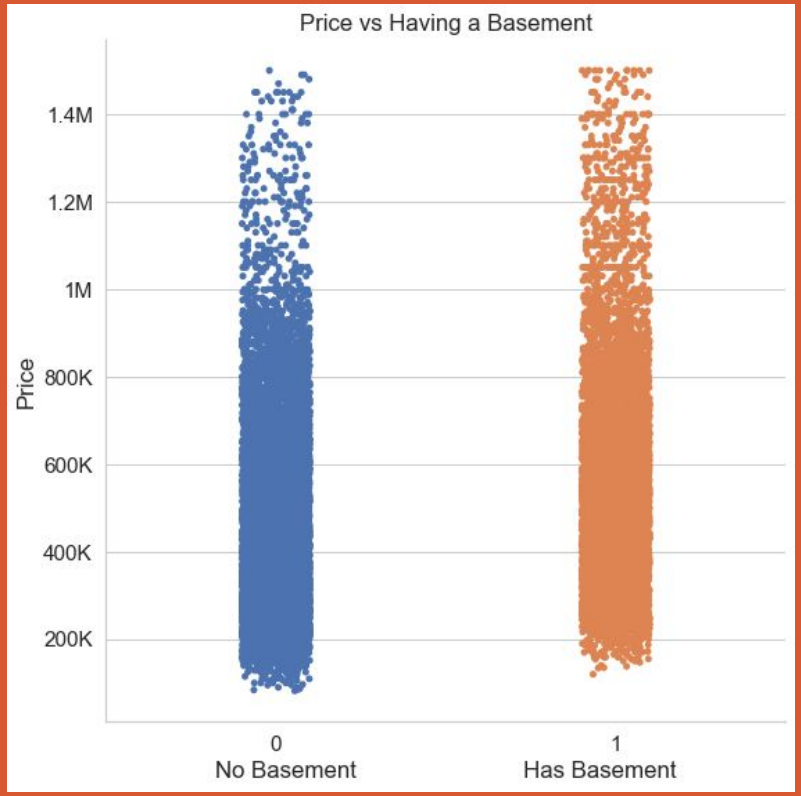
EDA


Price vs Square Footage
1.4M
1.2M
1M
800K
600K
400K
200K
Price
0
2000
4000
6000
8000
10000
12000
14000
Square Footage

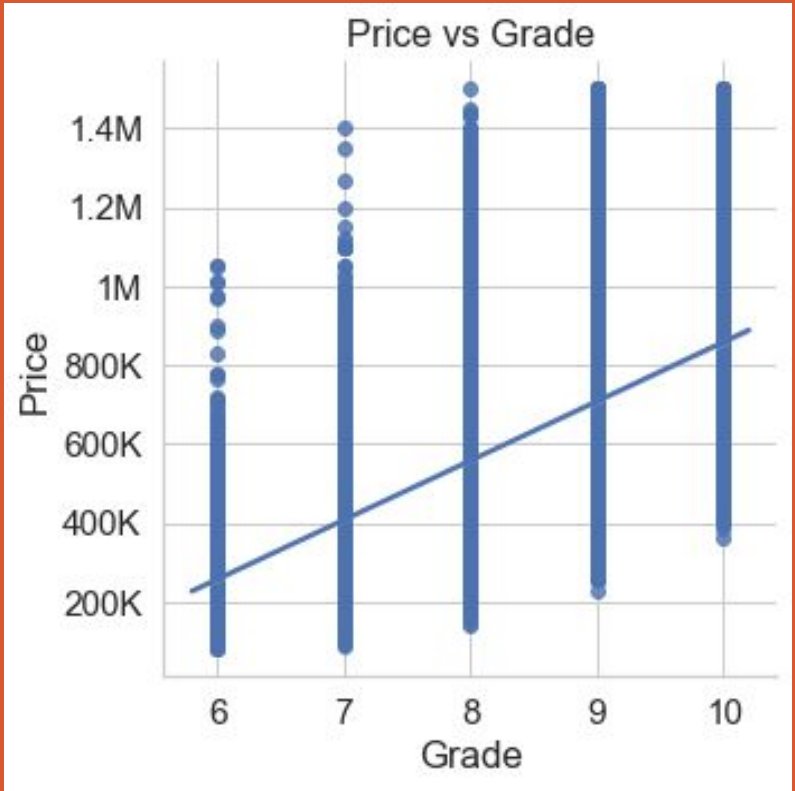

Price vs Total Rooms
1.4M
1.2M
1M
800K
600K
400K
200K
Price
2
4
6
8
10
Total Rooms

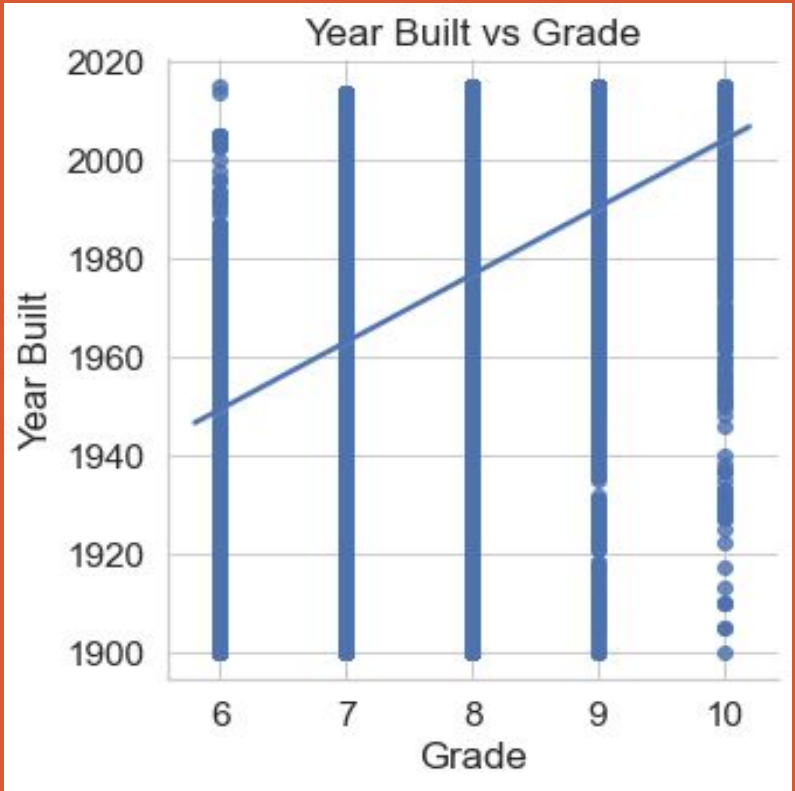
EDA


Price vs Time Since Renovated
1.4M
1.2M
1M
800K
600K
400K
200K
Price
0
20
40
60
80
100
120
Time Since Renovated(In Years)


Price vs Having a Basement
1.4M
1.2M
1M
800K
600K
400K
200K
Price
0
No Basement
1
Has Basement

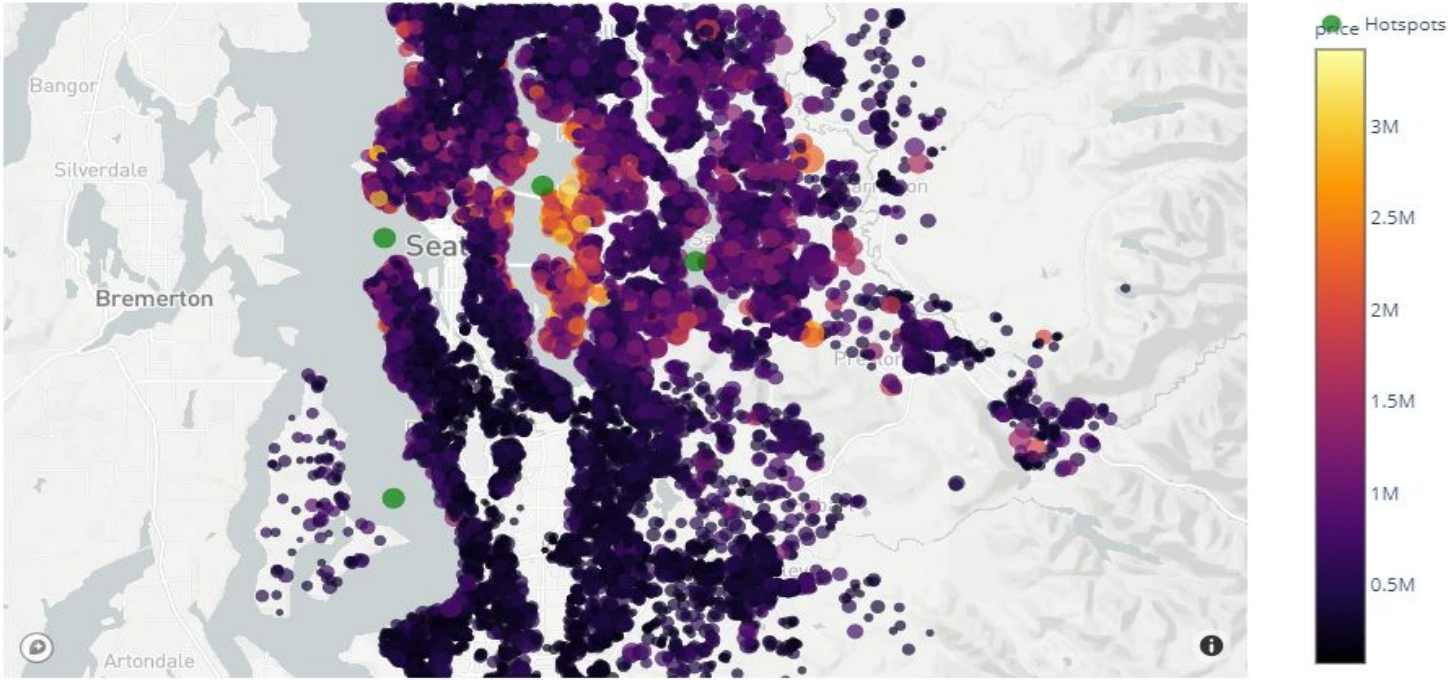
EDA


Price vs Grade
Price
1.4M
1.2M
1M
800K
600K
400K
200K
6
7
8
9
10
Grade


Year Built vs Grade
Year Built
2020
2000
1980
1960
1940
1920
1900
6
7
8
9
10
Grade

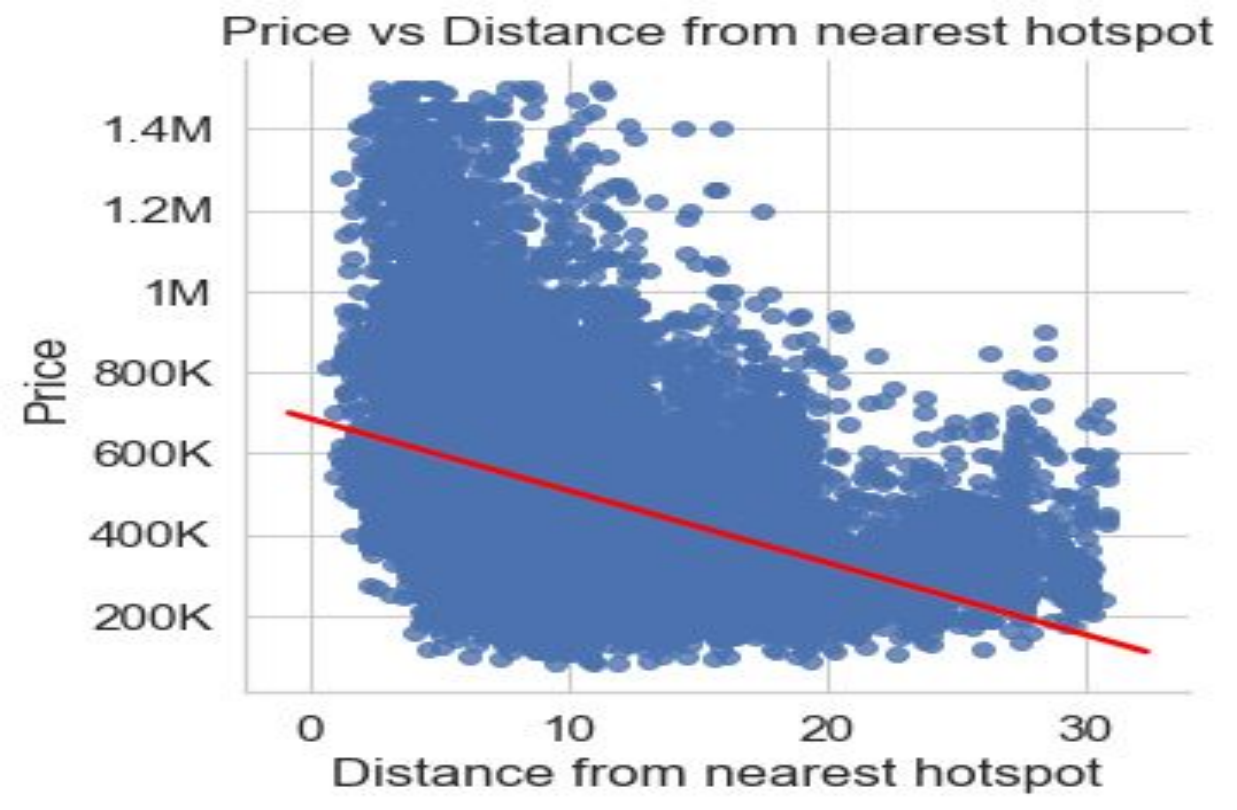
EDA

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


Price vs Distance from nearest hotspot
1.4M
1.2M
1M
800K
600K
400K
200K
Price
0
10
20
30
Distance from nearest hotspot

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/Grade^2	Meta score^2 * 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

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thank
you