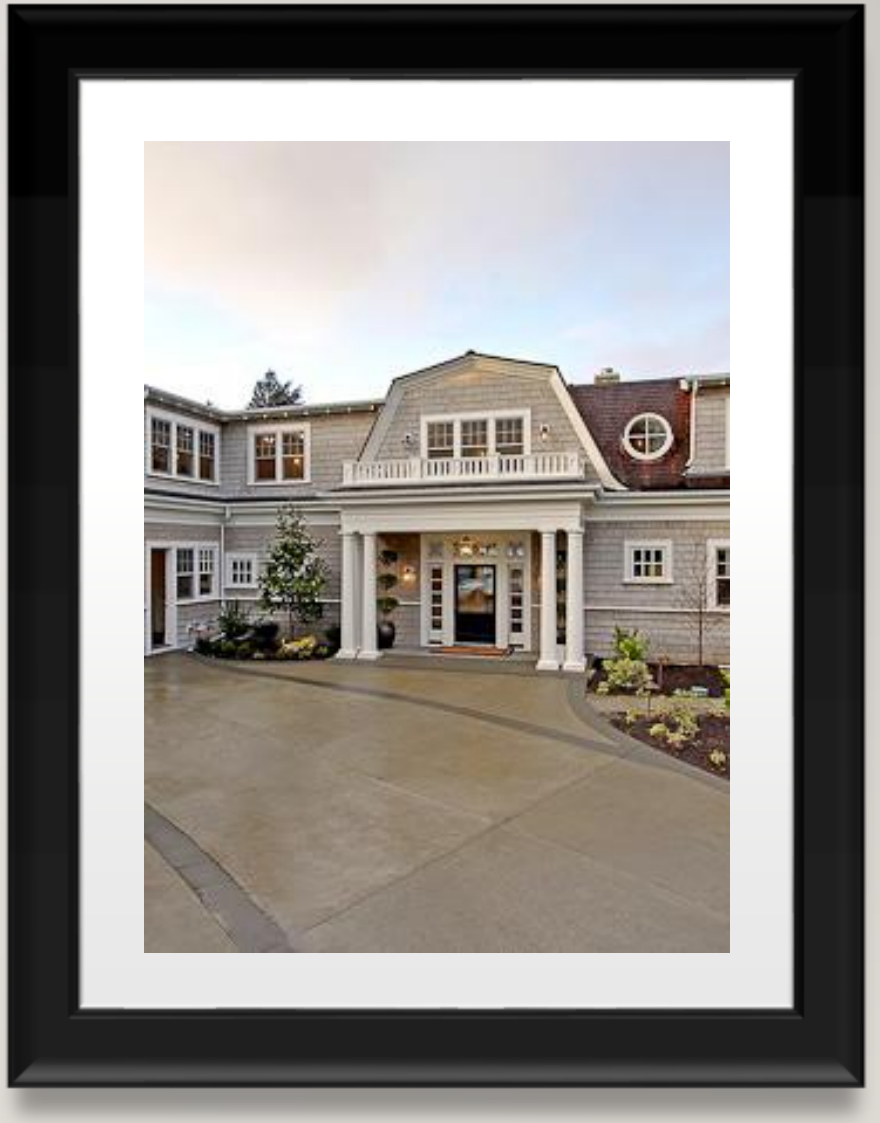
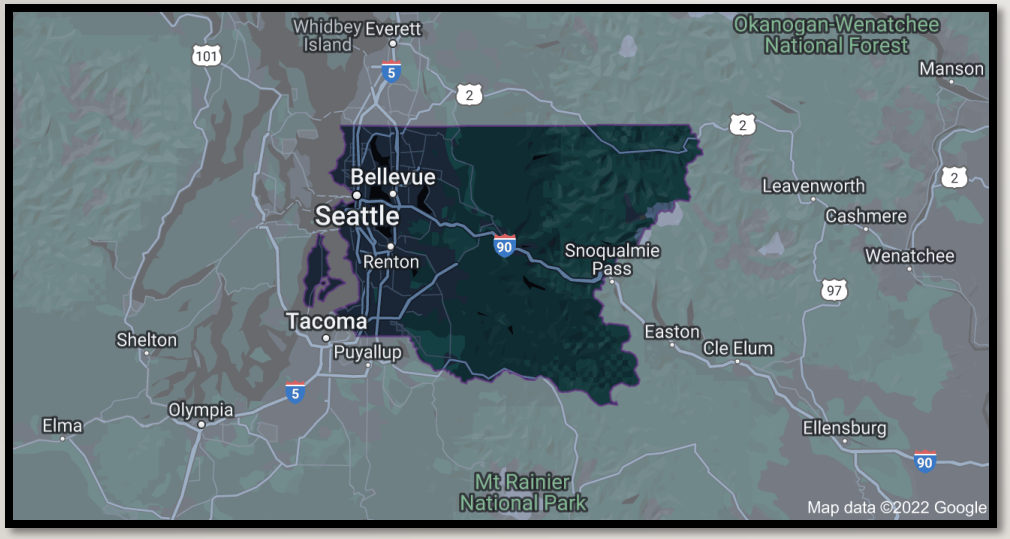
KINGS COUNTY ANALYSIS

By: Troy Hendrickson, Data Scientist



BUSINESS PROBLEM



- A newlywed couple has recently embarked on their new journey together and would like to build a family in their first home in the area of Kings County.
- My duty is to give them the best price predictions of homes in the area using data science and data analytics

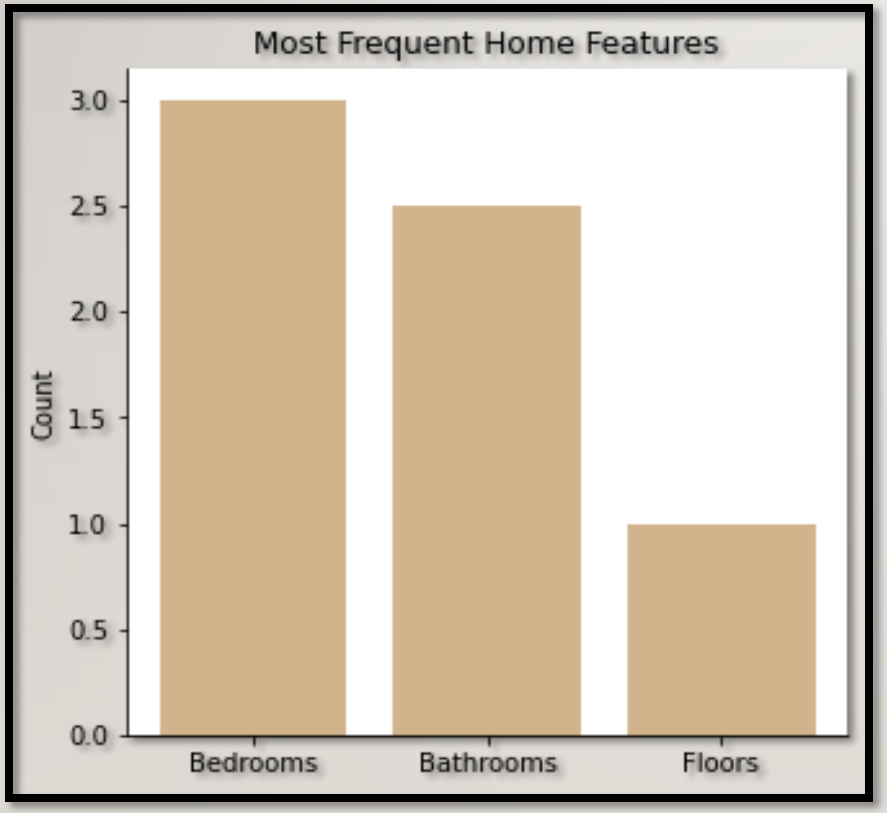
STAKEHOLDERS

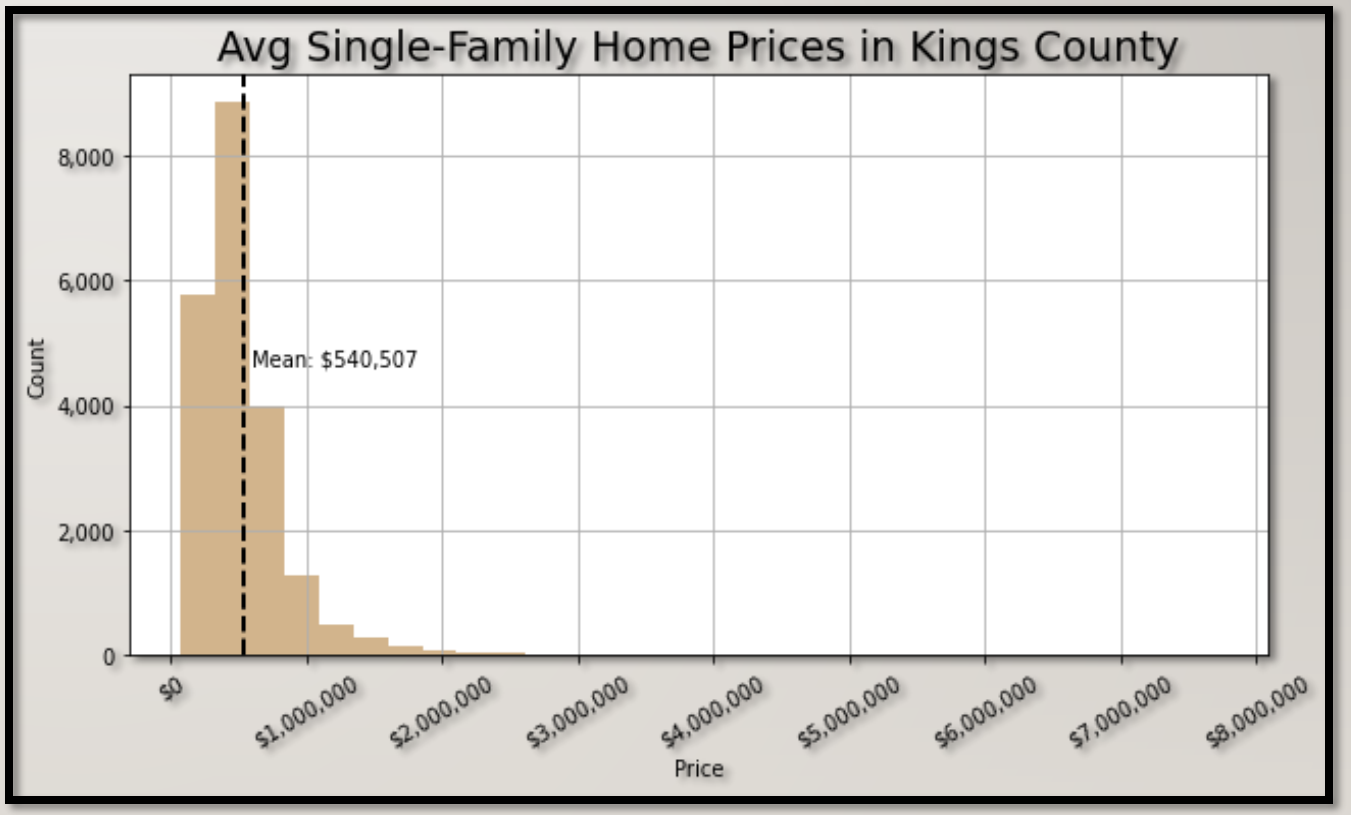
- $500,000 budget
- 3 Bedroom Home
- Possible Investment?

THE DATA

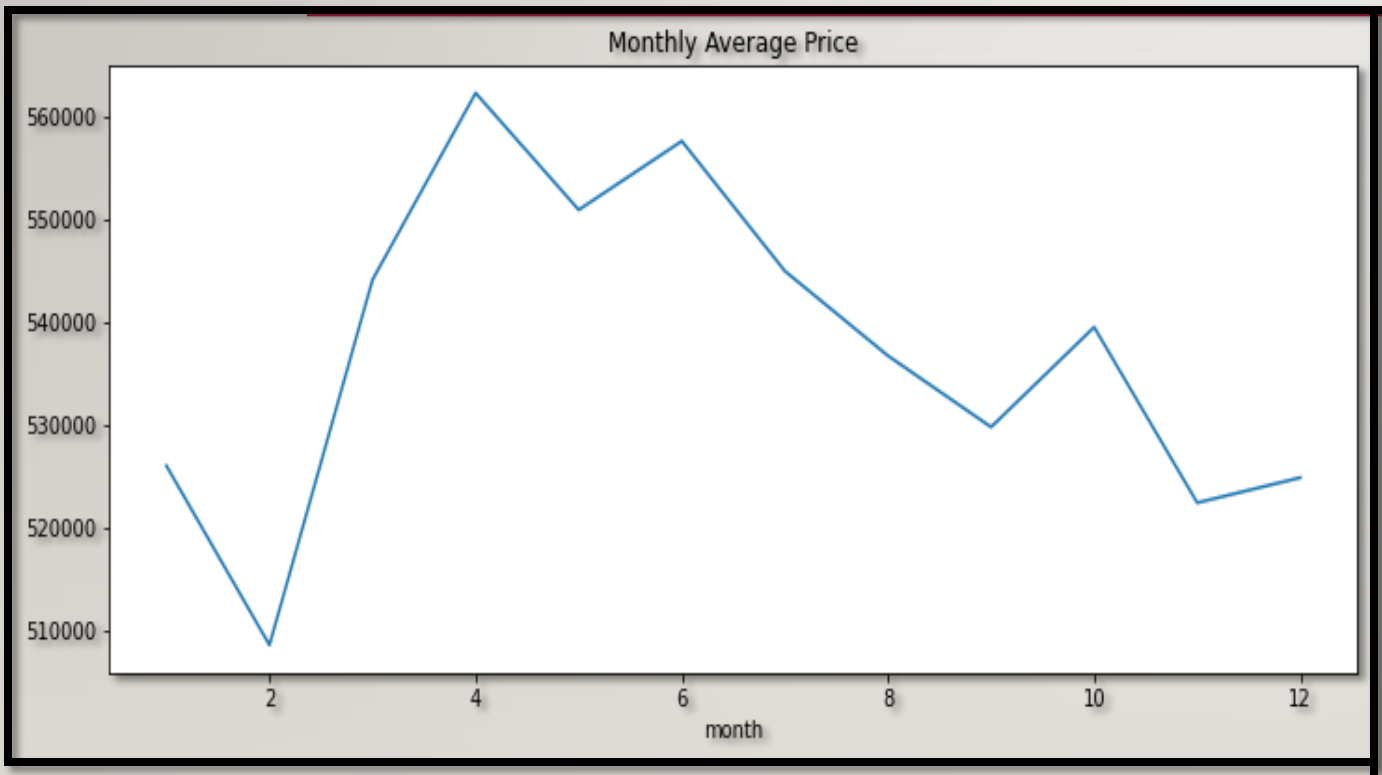
- King County House Sales dataset
- data/kc_house_data.csv

EXPLORING THE DATA





THE DATA


Monthly Average Price
560000
550000
540000
530000
520000
510000
2
4
6
8
10
12
month


Home Location vs. Price
price
1.5
3.0
4.5
6.0
7.5
47.8
47.7
47.6
47.5
47.4
47.3
47.2
Latitude
−122.4
−122.2
−122.0
−121.8
−121.6
−121.4
Longitude

CONDITION

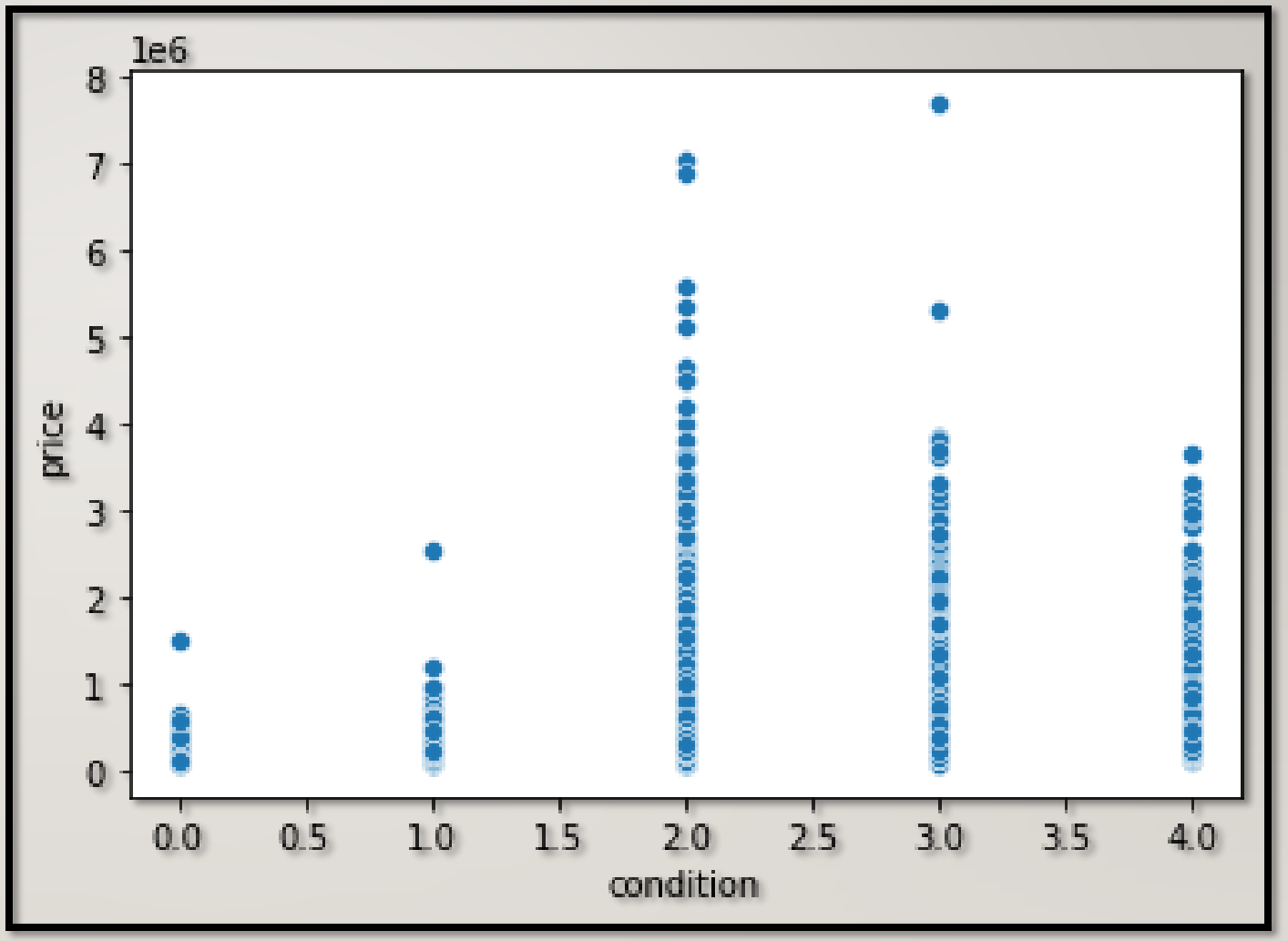
0 = **Poor**: Many repairs needed.

1 = **Fair**: Some repairs needed.

2 = **Average**: Normal amount of upkeep. (age depending).

3= **Good:** Above average condition. Indicates Improvements have been made.

4 = **Very Good**: Excellent maintenance

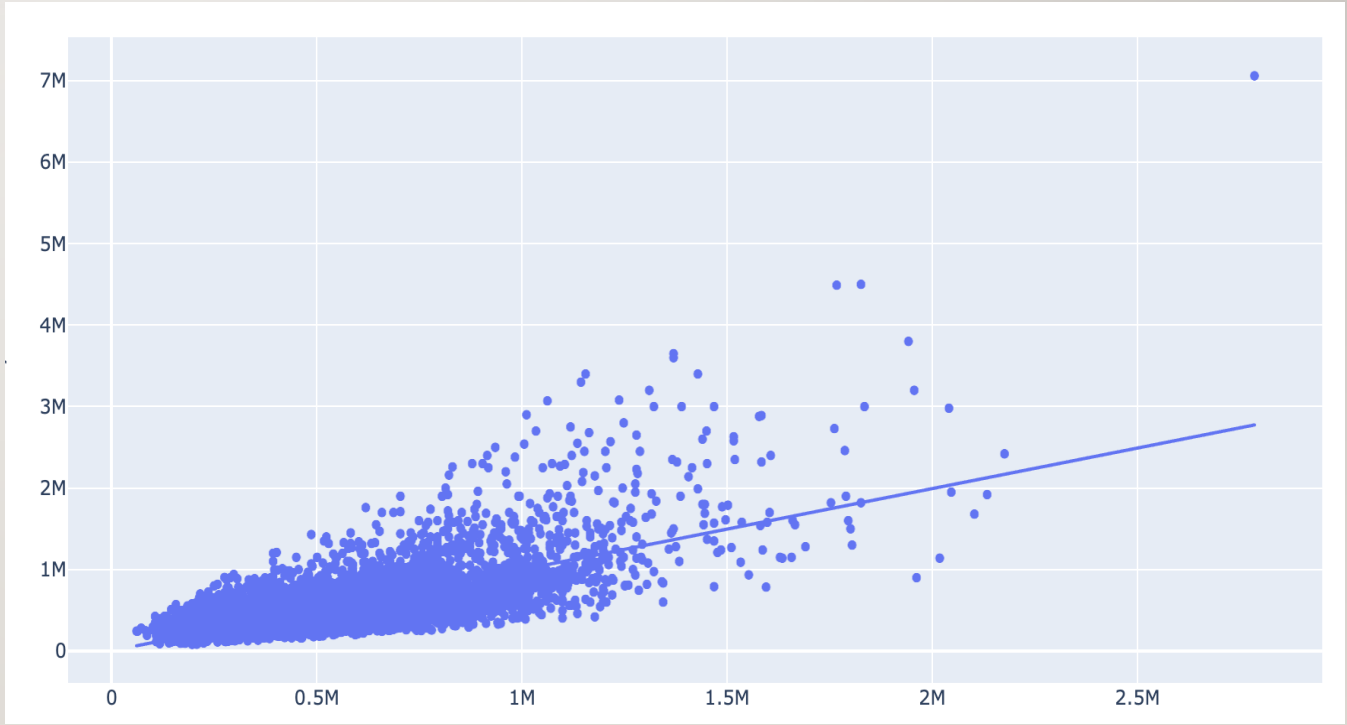


MODELING – BASE MODEL (SQFT LIVING SPACE VS. PRICE

Calculations and Errors

Mean Absolute Error = ±$175,656.17

$R^2 = 0.49$



MORE MODELING

Structural Features vs. Price

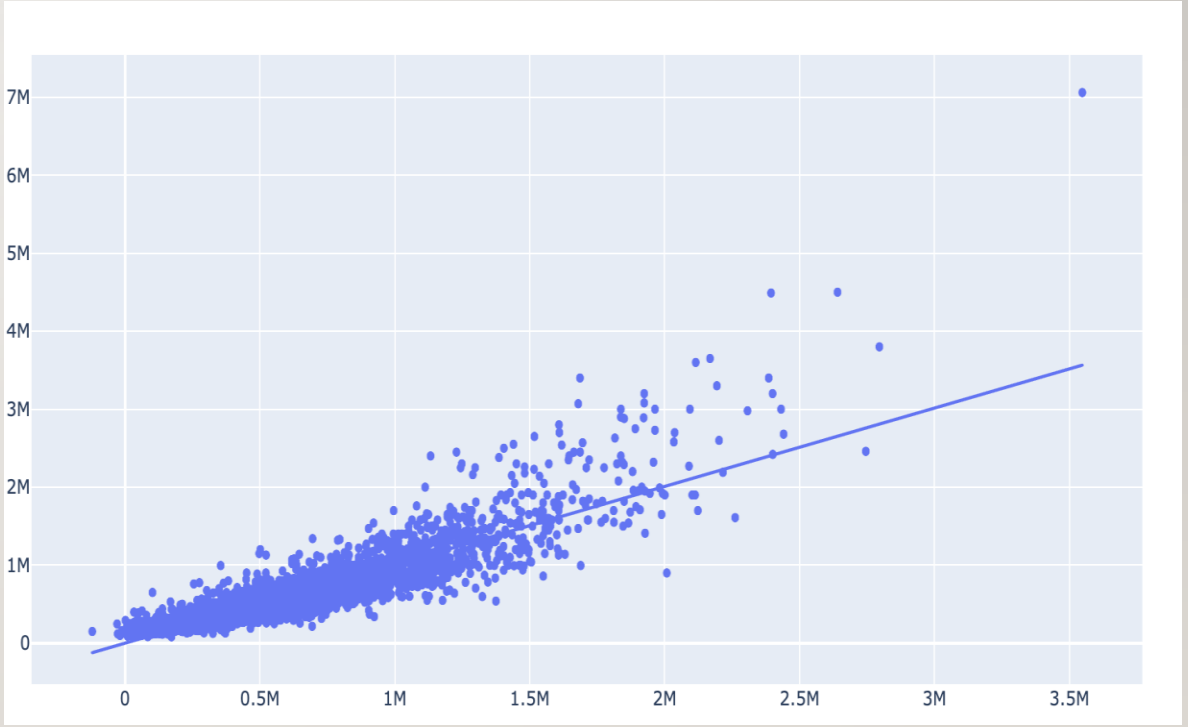
- Bedrooms, Bathrooms, Floors, SqFt, etc.
- Mean Absolute Error = ±$233,229.87
- $R^2 = 0.51$

Selling Features vs. Price

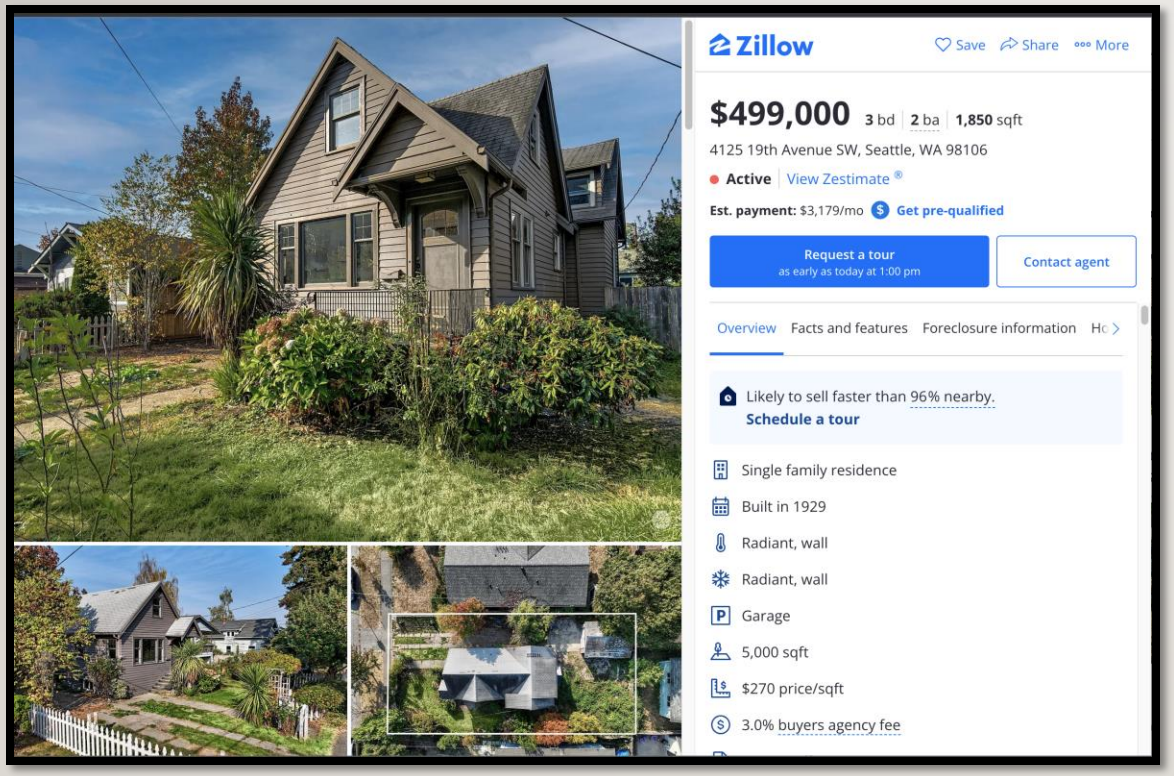
- Waterfront, View, Condition, etc.
- Mean Absolute Error = ±$146,334.17
- $R^{2} = 0.62$

FINAL MODEL

- Waterfront property
- Sq footage of living space and lot
- Condition
- Location
- Sq footage above
- Mean Absolute Error = ± $98,078.25
- R2 = 0.81



RECOMMENDATIONS

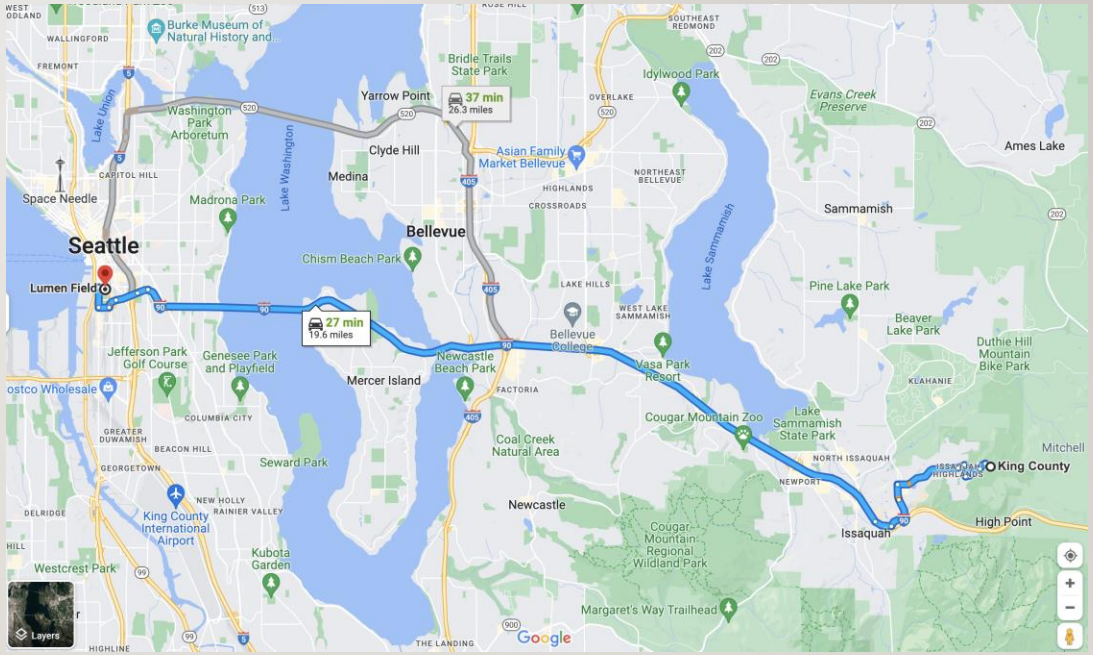


- Home of around $462,557
- Scratching the surface of budget
- Home does need improvements
- Can be used as investment

CONCLUSIONS / NEXT STEPS

- Check out a larger data set
- More updated data set
- What does price look like around different attractions in the area (restaurants, malls, etc.)
- Weather have any factor on price?

CONCLUSIONS/ NEXT STEPS



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