



HOUSING PRICE PREDICTION MODEL

King County, Washington

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PROBLEM STATEMENT

- * Identifying house properties
- * Identifying investments for business value

Which properties of a house contribute positively to the price of the house?
Once those properties are identified, can solid investments be identified as well?

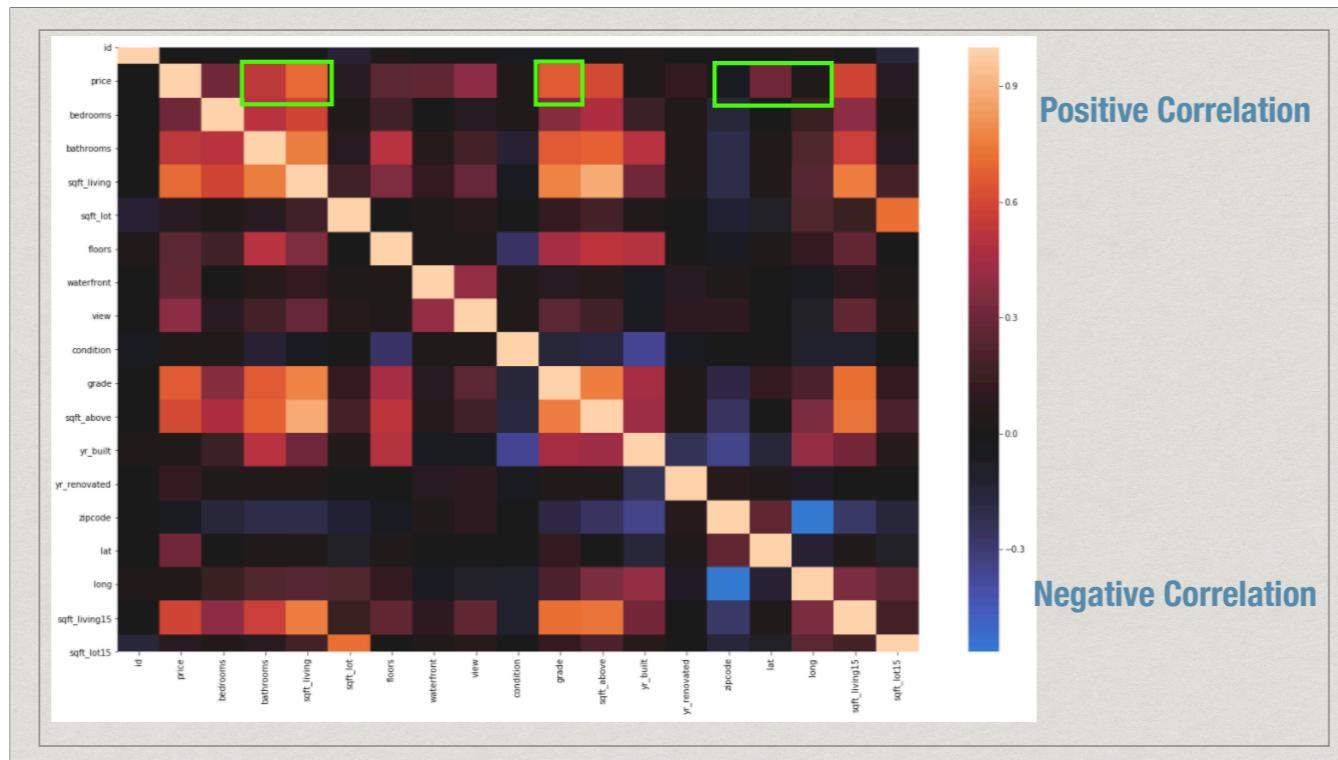
METHODS:

- Examine any correlations with price
- Discuss model features
- Review model results



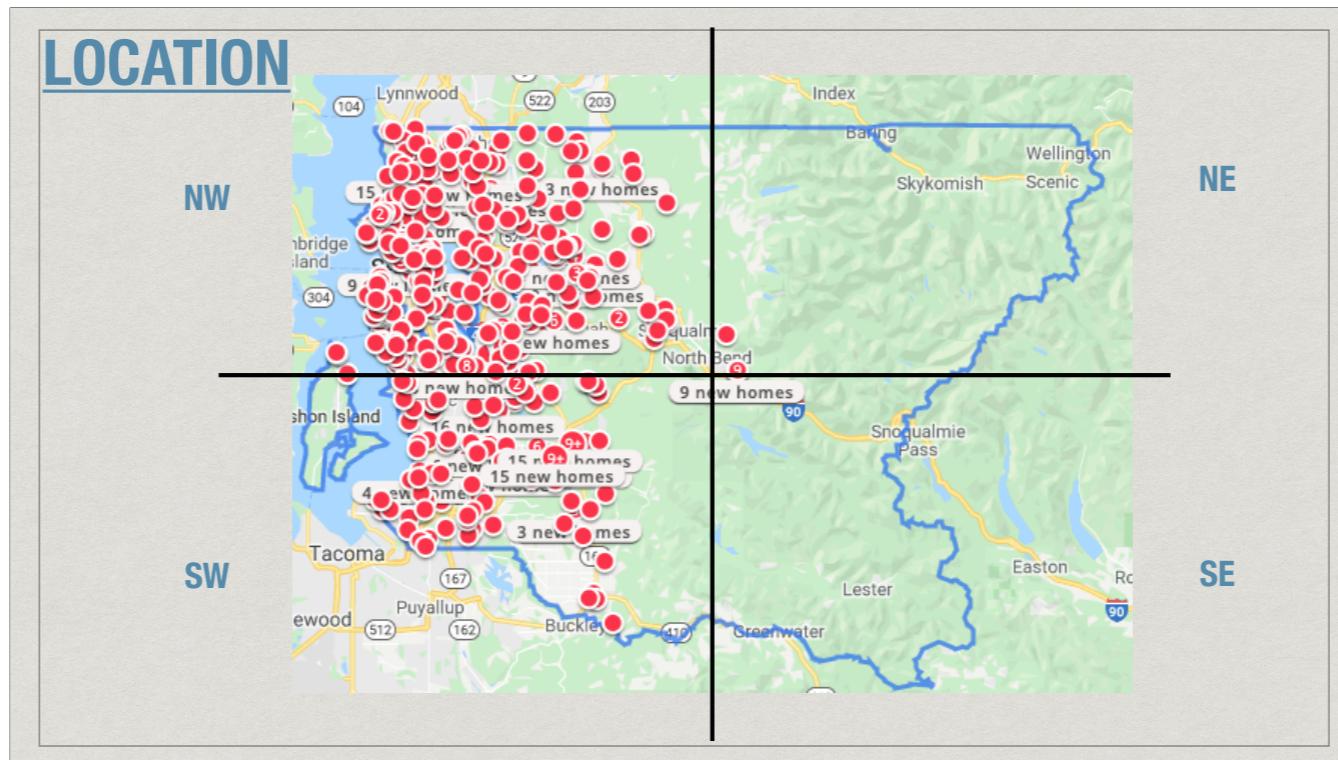
Look for any linear relationships among the factors of a house and its price. Is there anything from the raw data that indicates that there is a linear relationship?

Inspect the properties of these indicators to understand their value

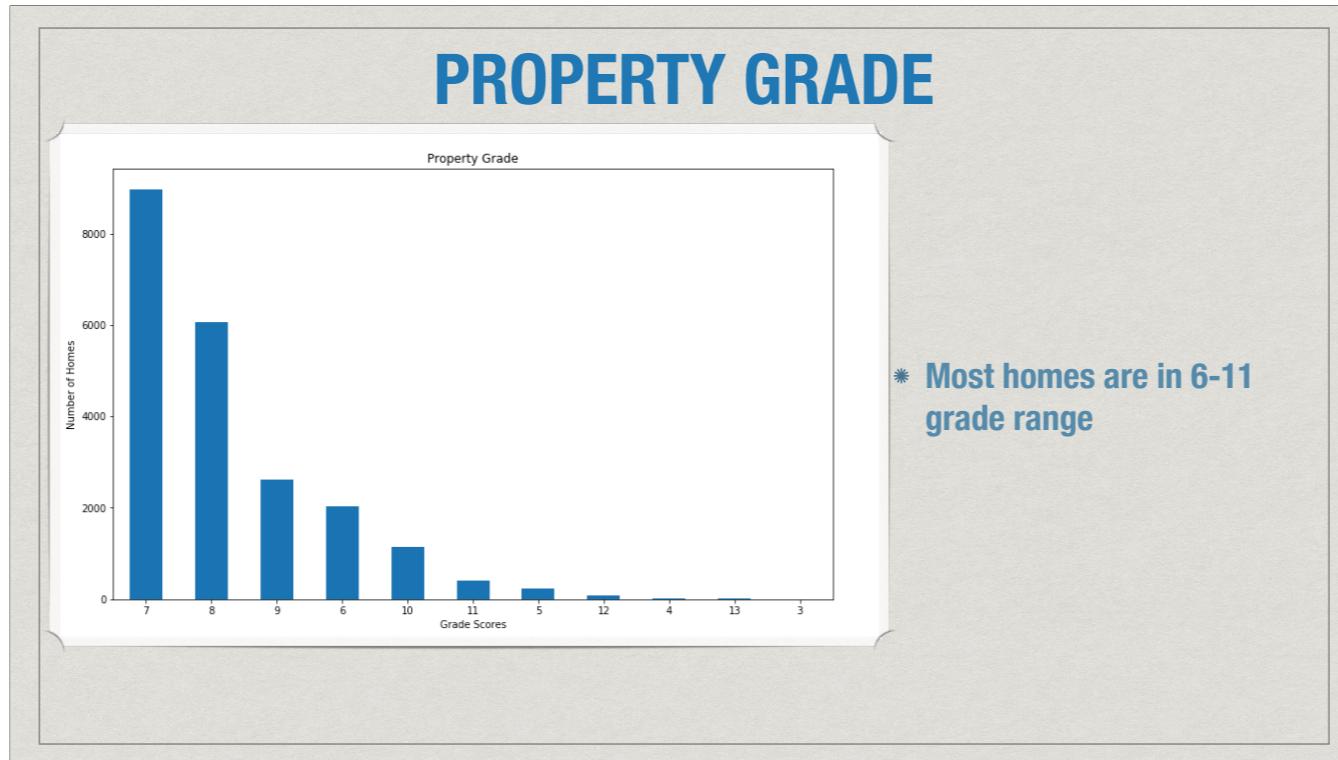


The columns with a positive correlation are more important to focus on because they will contribute to dollars on price. The bathrooms, living square footage, and grade have a positive correlation.

The data columns that have location data don't have any distinguishable relationships with price but could still be something to investigate.



The data was manipulated in a way that separated the properties by quadrants. Now these quadrants can be inspected to see if there is any relationship between location and price.



This graph shows how many homes are in each grade category. This is interesting to look at because if grade has a positive dollar influence on price, houses that have room to improve their grade will be good investments.

RESULTS

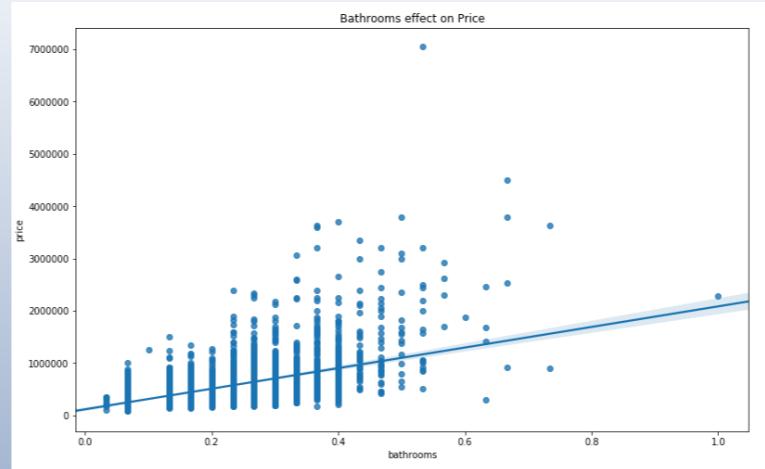
Prediction Accuracy: 66% of the change in price can be explained by the model

Generalization: The model performs similarly with new data

R squared value was 0.66. Plenty of errors exist in the model to be considered an accurate predictor. The relationships are valid and will be present in the outcome from new data.

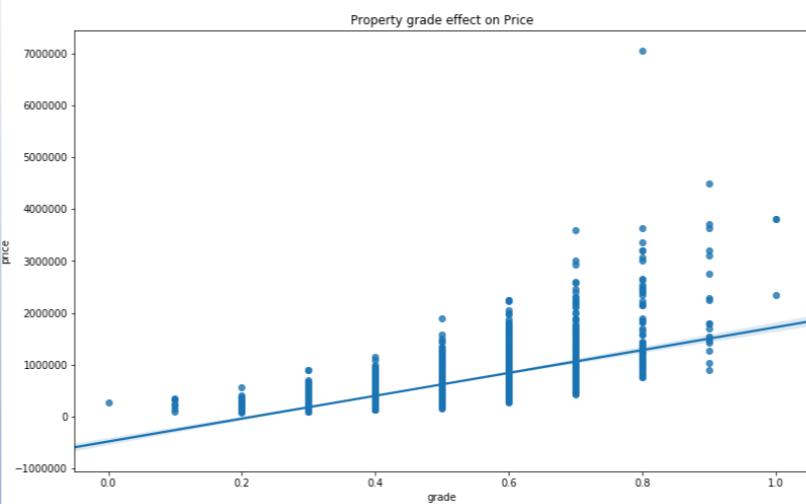
RESULTS

Bathrooms effect on price:



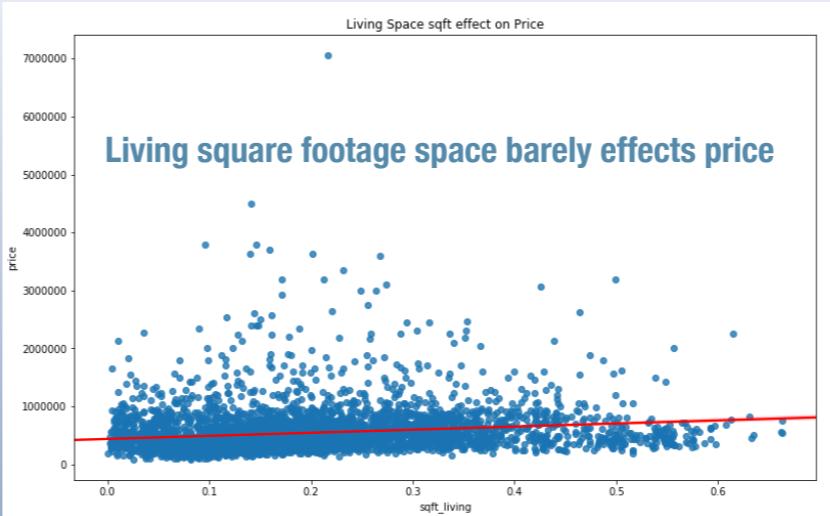
As the number of bathrooms increase, the price increases. Units on bathrooms have been scaled but the relationship still holds.

Grade's effect on Price



Property grade increases will increase price as well. Buying a home with a lower grade and then upgrading to higher grade will increase price. This will be an important factor when considering investments.

Living Square Footage effect on Price



The slope of the line is almost horizontal which means it barely has a positive effect on price.

FUTURE WORKS

- * Different methods of feature scaling
- * Rethink location feature
- * Use stepwise feature selection instead of recursive

Thank You