

KING COUNTY HOUSE PRICE ANALYSIS

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OVERVIEW AND BUSINESS UNDERSTANDING

The purpose of this project is to inform you the Real Estate Stakeholders what affects the values of homes in King County House Sale using a linear regression model.

SELLING YOUR HOUSE FAST?

We Buy Houses!

- *Any condition*
- *Any situation*
- *Any problem*



King County House Price Data(2014-2015)

- 21,613 House Sales with 21 features
- Average House price:\$540,000
- Average lot size: 21,000 Square feet
- Average Bedrooms: 3 -7
- Location: King County WA
- Model used : Linear Regression



BEDROOM



BATHROOM



WATERFRONT



SQUARE FEET
LIVING



LONGITUDE
AND LATITUDE

EXPLORATORY DATA ANALYSIS



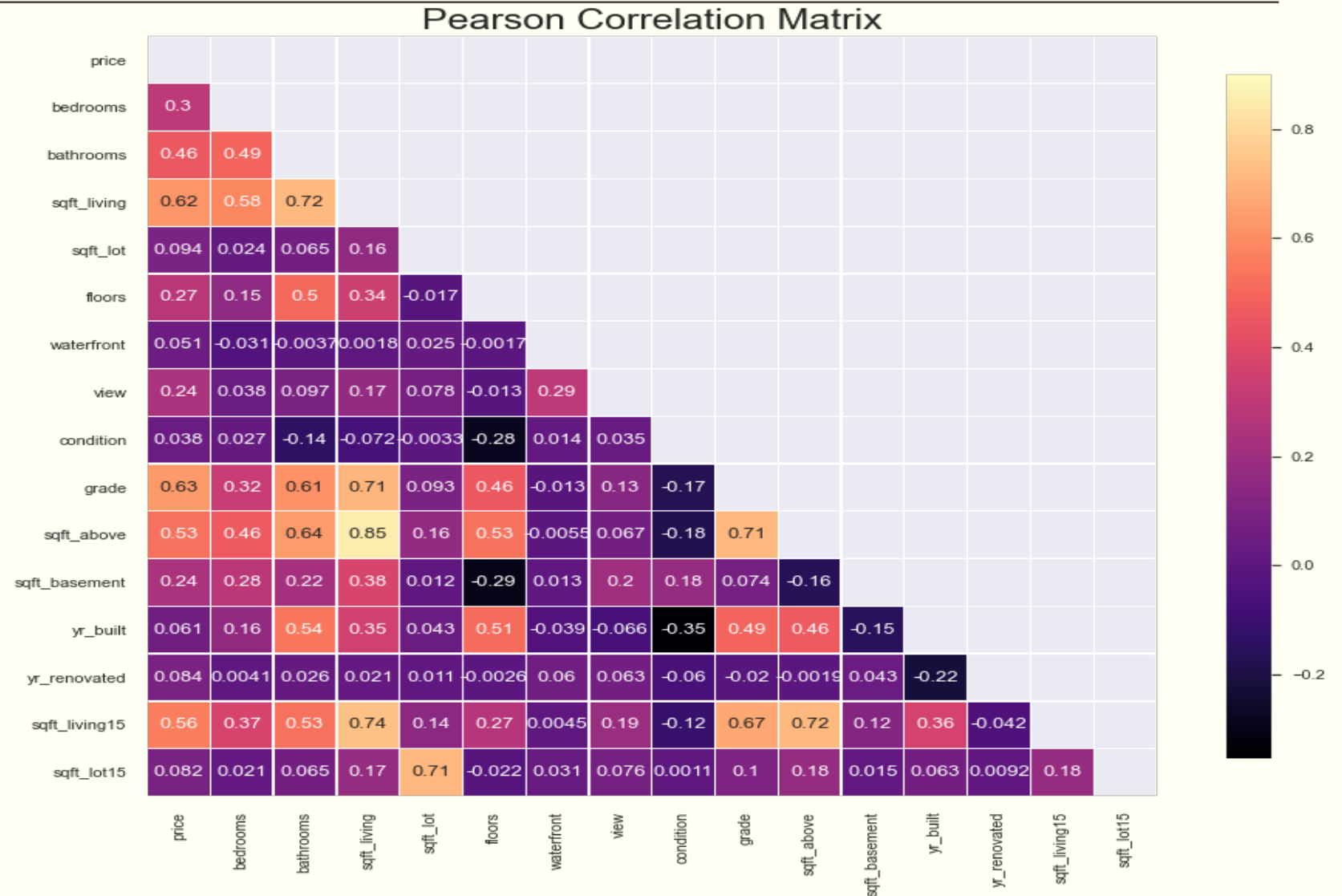
Factors to look at



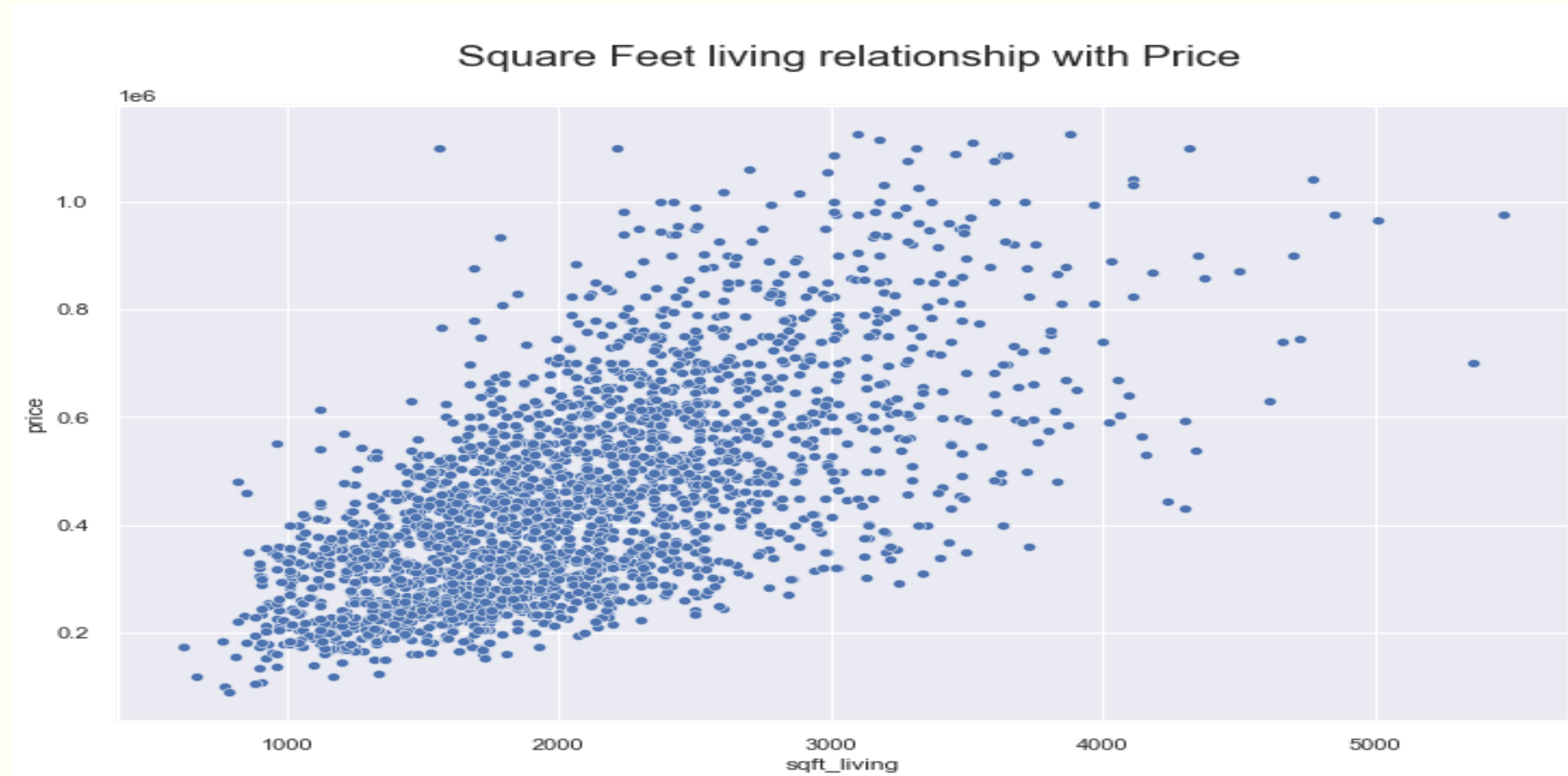
- Does the square feet living have any impact on house prices?
- Does the grade have any impact on house prices?
- Are waterfront houses priced higher?
- Does the number of bedrooms have any impact on house prices?

The most significant influence on house prices

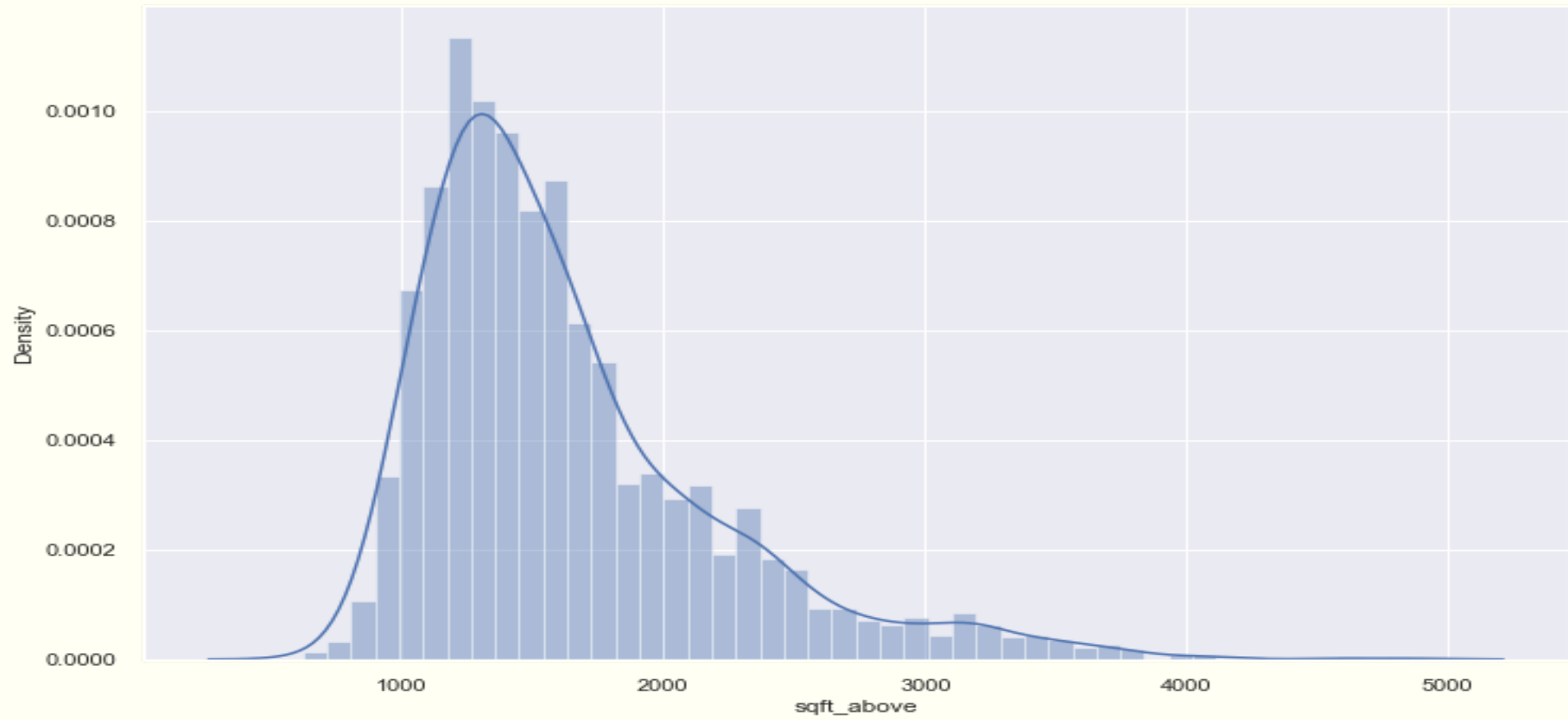
- ✓ Square feet living
- ✓ Waterfront
- ✓ Grade
- ✓ Square feet above



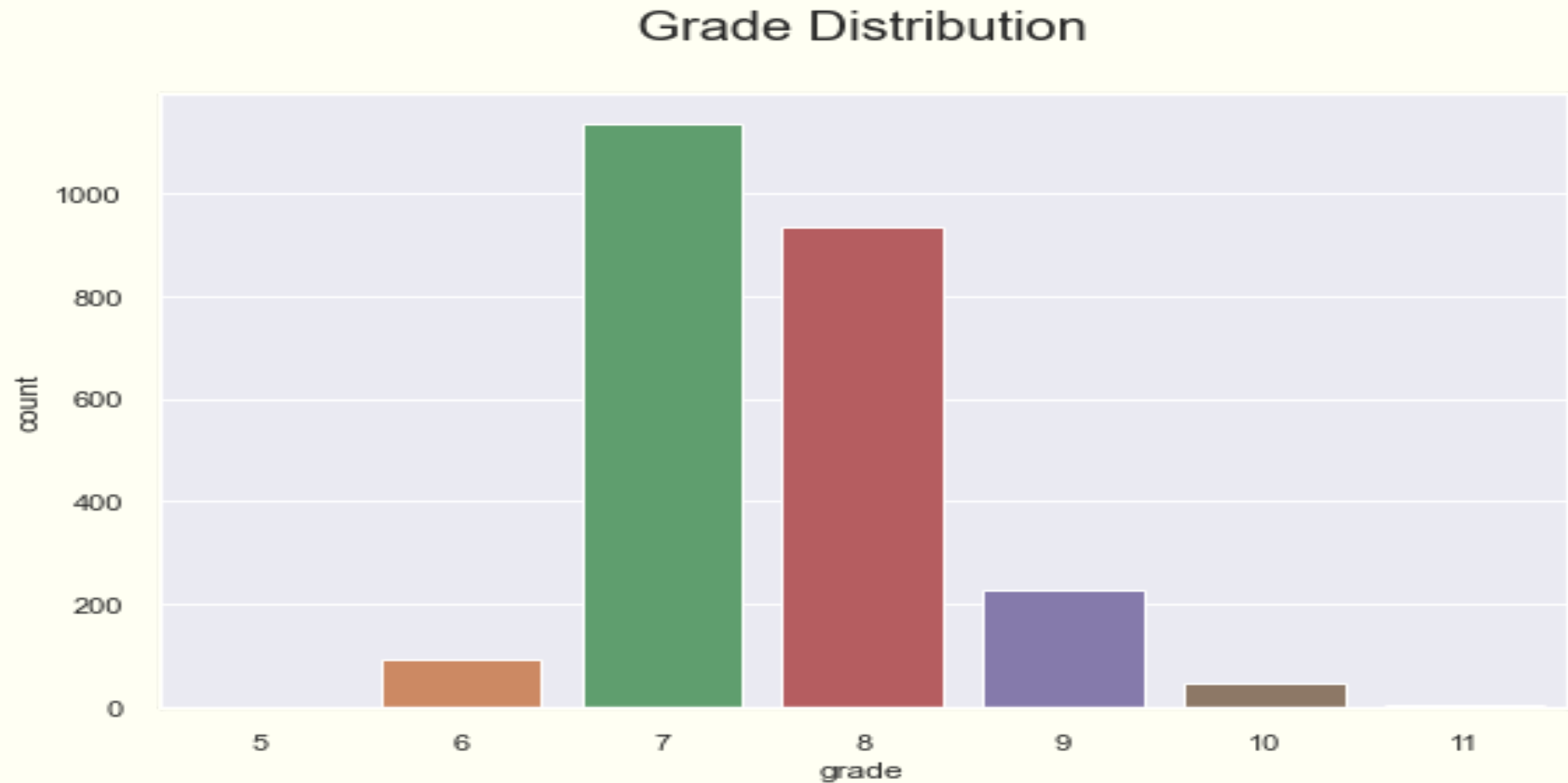
The value of the house increases as we increase the square feet living of the house indicating is positively correlated.



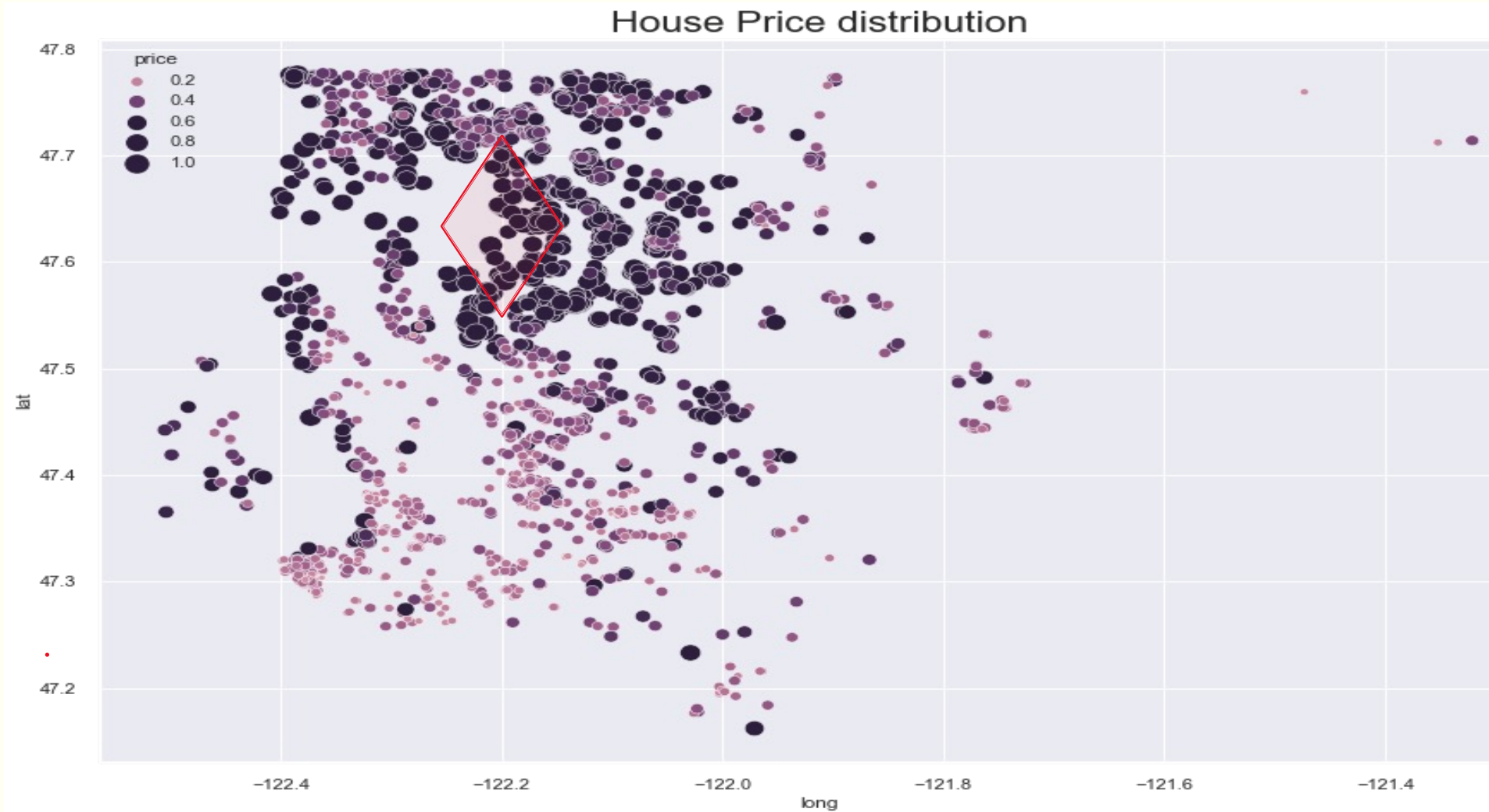
Square feet above Price distribution



The King's County grading system shows the grading between the number 1 to 11 with an average of 7 to 8



Location Distribution: House price distribution show houses closer to waterfront has higher prices



Result



Increase in R-squared 0.696 to 0.764 using polynomial regression
Decrease in RMSE : \$ 151414.98 to 104799.97



The RMSE is 104799.97, which means that the standard deviation of the unexplained variance (error) is on average \$104799.97.



The projections will need to be double-checked to verify they make sense given what is known about the house

Recommendation



Square Foot Living: More square feet means a higher value for the house. Our model shows that when the square feet is larger, the higher the price.



High Grade: Properties with excellent grades get a better price and are considered of a high value compared to homes with lower grades.



Location are Key: When a home sits on the waterfront, its value is higher than the same property without a waterfront view. It's important to recognize this fact.



NEXT STEP

Future work would need more insight into how zip code influenced house prices; are the number of houses in specific zip codes have higher sales prices?

To determine the validity of the data further, I will use the polynomial regression model.



THANK YOU

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