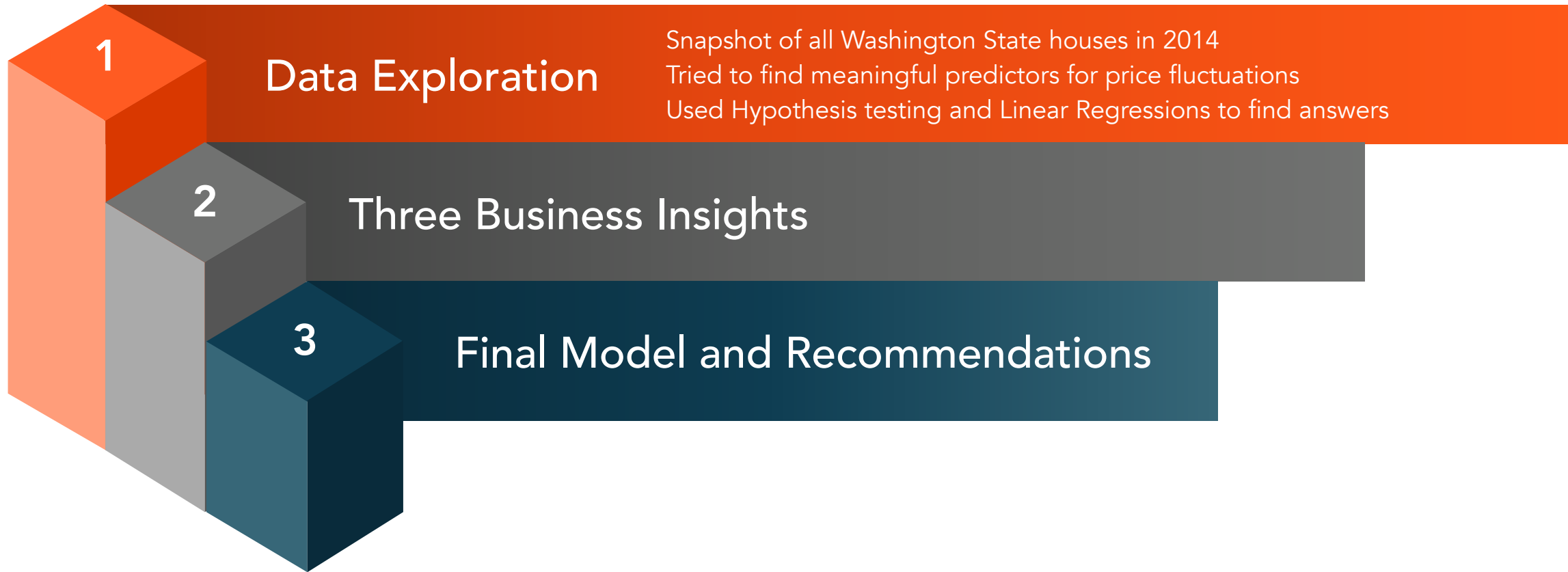




Overview of the Washington Housing Market

Methodology and Objectives



3 Different Questions

Where?

Where are the most expensive
houses concentrated?

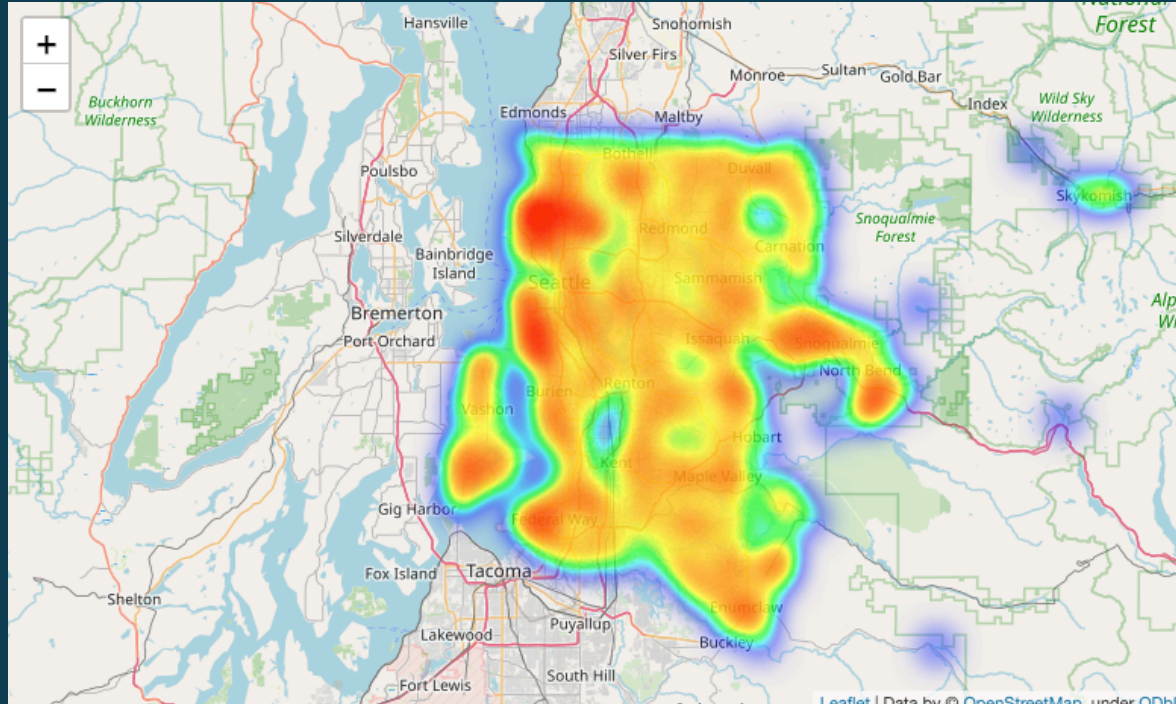
Renovating?

Does renovating your house bring
extra money in the long-run term?

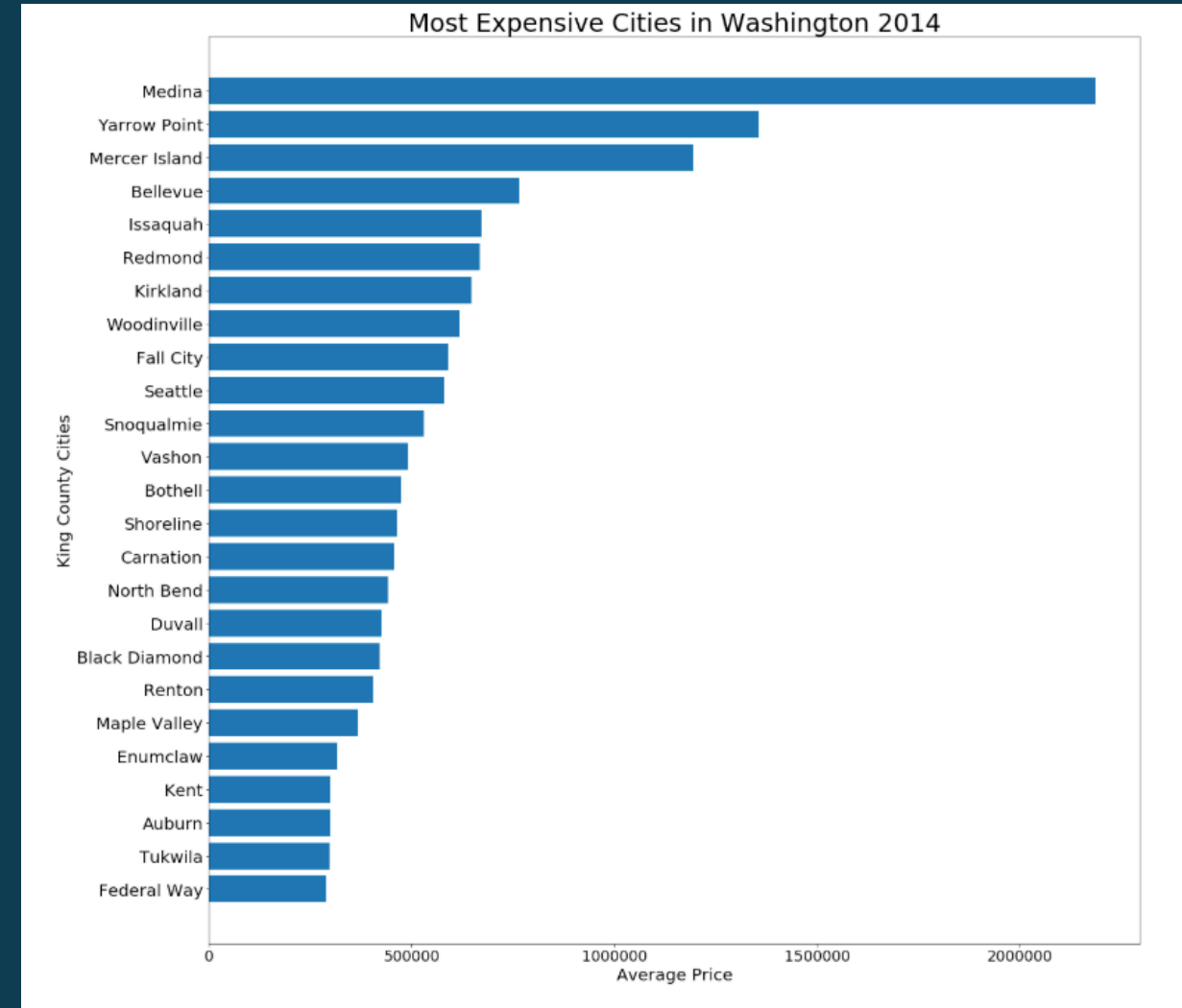
Selling?

Have the price of houses gone up
this year?

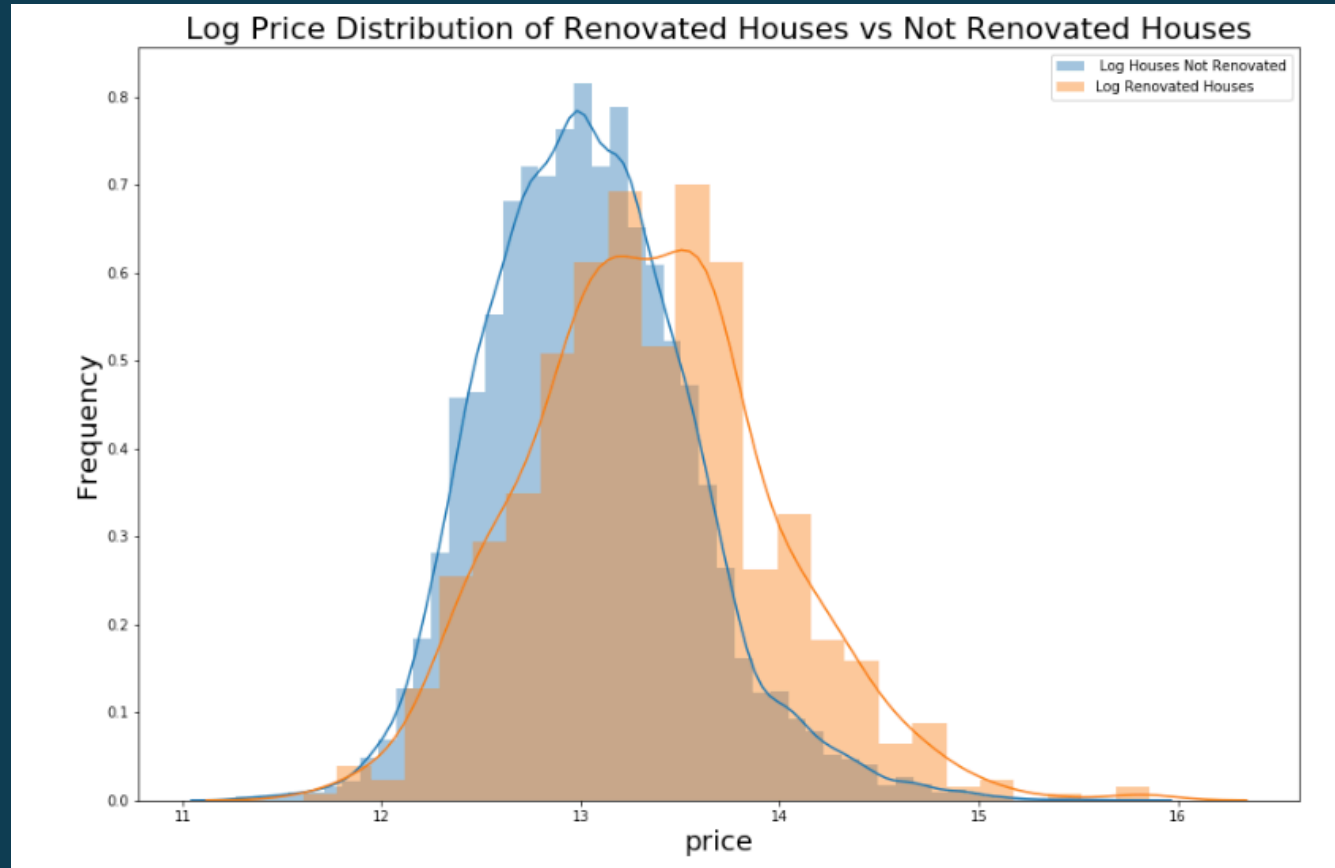
House Density and Most Expensive Cities in 2014



The highest density of houses is concentrated around the Seattle area with Medina being the most expensive city on average. 2x more expensive on average than the other cities.

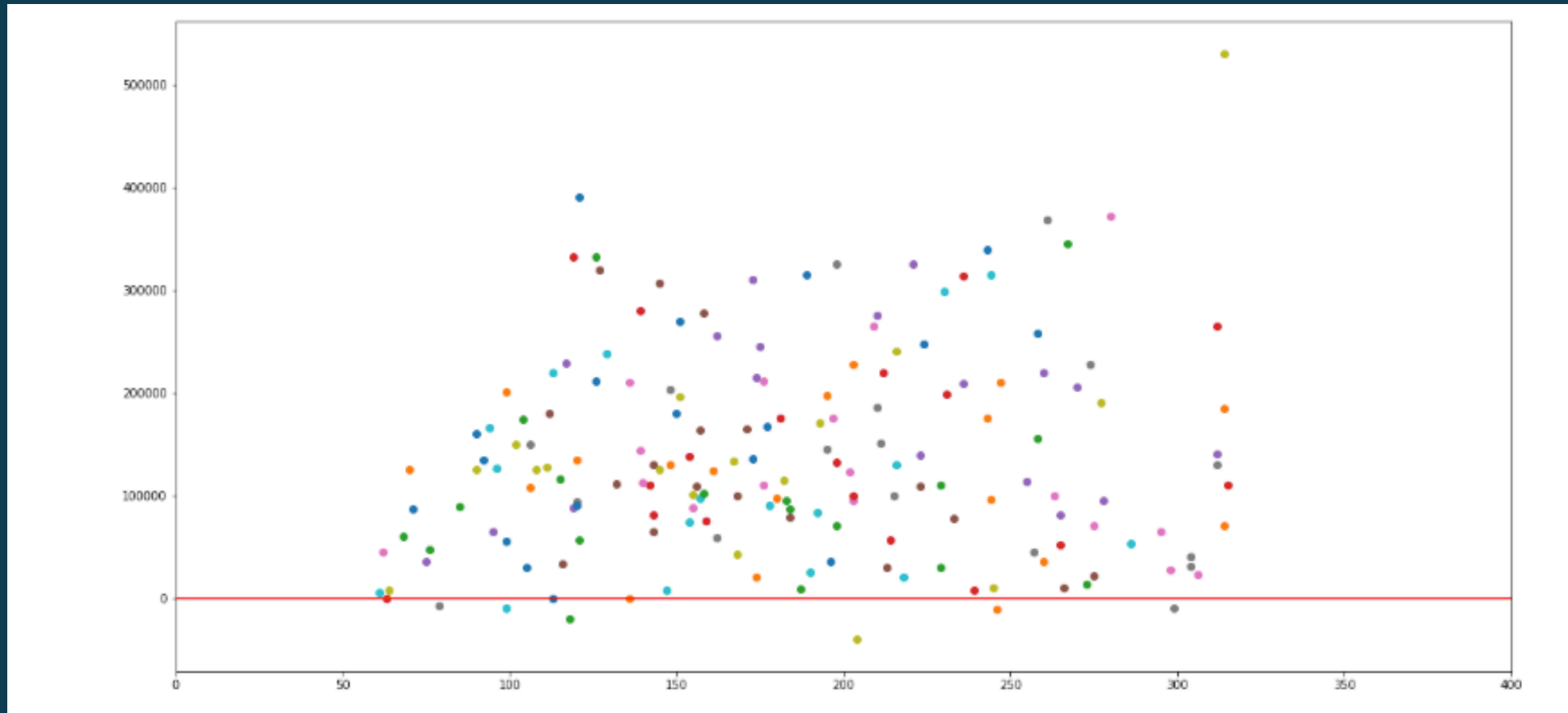


Does renovating your house actually make it more valuable?



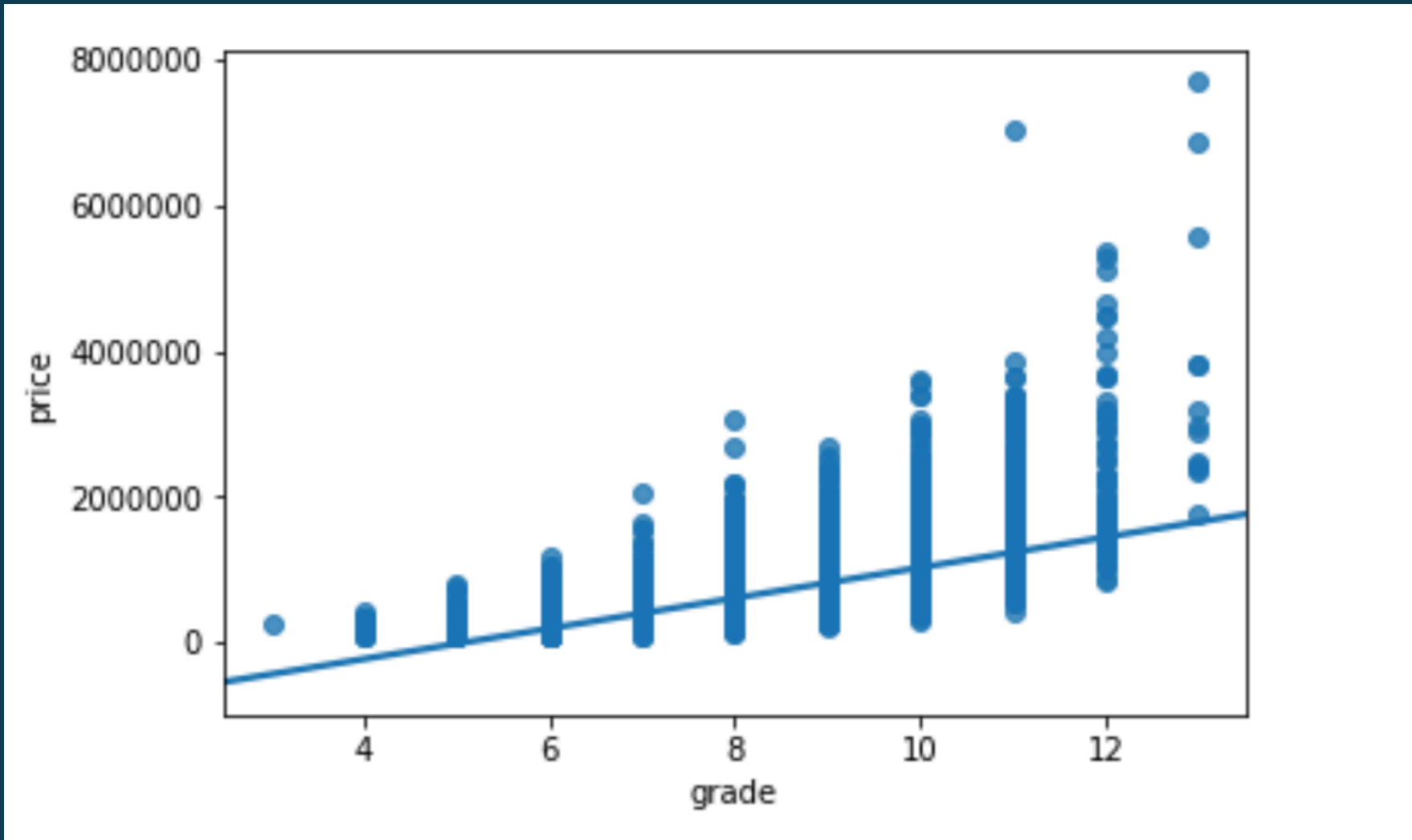
We have compared a sample that went through renovation with another sample of houses that didn't go through renovation. Based on the information on the dataset, we concluded that there is a significant difference in prices across the two groups and we have quantified in our model the benefit of renovating in dollars.

Has time had an influence on the prices of houses in King County?



The above graph shows how the houses that were sold more than once per year were sold at a higher price ranging up to 500,000 USD more all within the 350 days since the previous purchase was made. Anything below the red line means the second price the house as sold at was lower than the initial.

What are the major players affecting prices?



After running some tests we have concluded that these factors are affecting final price more than others. We have added on top of grade, other 3 factors: size of the house, number of bathrooms, bedrooms and renovation

$$\text{price} = 205550 \cdot \text{beta}\{\text{renovation_yes}\} + 15585 \cdot \text{beta}\{\text{bedrooms}\} + 176486 \cdot \text{beta}\{\text{grade}\} - 56166 \cdot \text{beta}\{\text{bathrooms}\} - 992057$$

By adding each unit of any of the above we get a corresponding increase in price by the amount shown. Each single additional bedroom seems to yield additional \$15k while one more bathroom can bring up the value by \$56k. Renovating shows \$200k more when applicable.