



Flatiron Module 1
Project: King
County House
Prices





Hello!

My name is Kiarash Ahmadi. I'm an aspiring Data Scientist with Flatiron Academy. I am also pursuing a Master's in Computational Science & Engineering at Georgia Tech.





Project Background

- King County Housing Sales from 2014-2015
- Model predicts housing prices based off different features
- Clean, Explore, and Model with Multi-Linear Regression





Questions to be answered

1. How does the quality of a house affect prices?

How can I quantify quality from the variables within the dataset?

2. What is a view's impact on house prices?

It's widely assumed that a view generally leads to higher housing prices.

3. Does location matter the most? If not what?

It was initially suspected that location affects housing prices the most.



How do I quantify quality?

Grades 1-6: Below Average

- Poor construction
- Simple Design
- Older
- Barely meets or fails to meet minimum building standards

Grades 7-9: Average

- Average to just above average design and construction
- Better materials in interior and exterior finish work

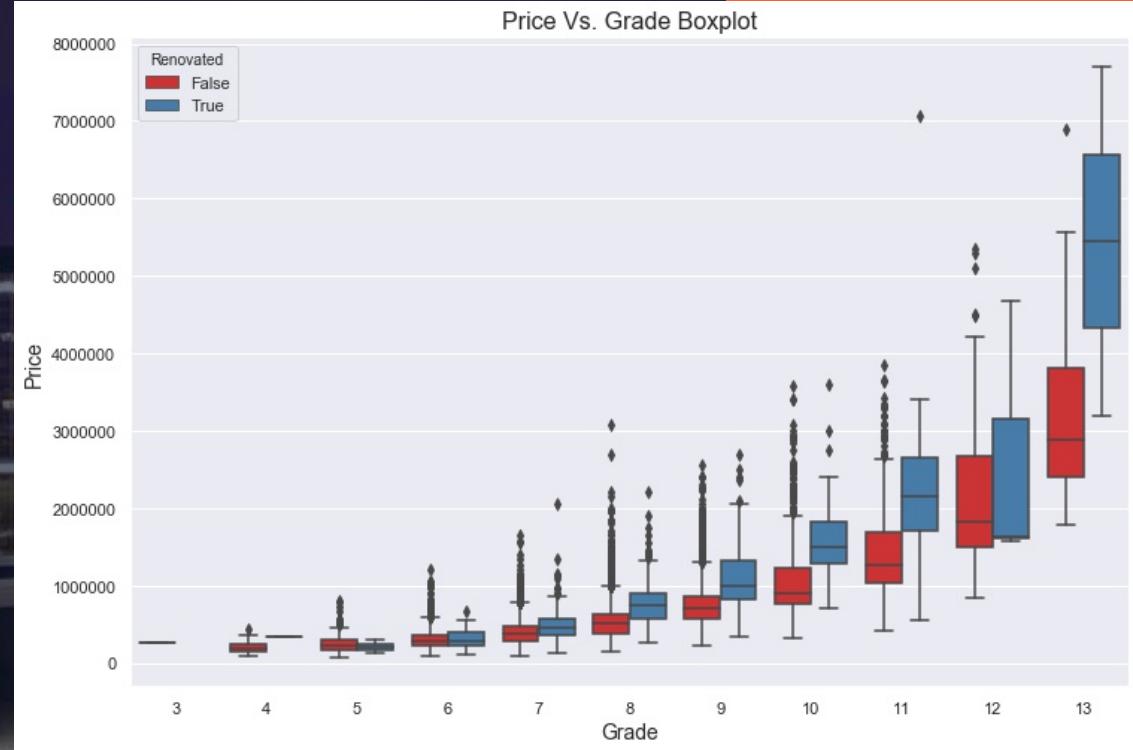
Grades 10-13: Above Average

- High quality features and materials
- Custom, detailed design
- More luxurious options



How does the quality of a house affect prices?

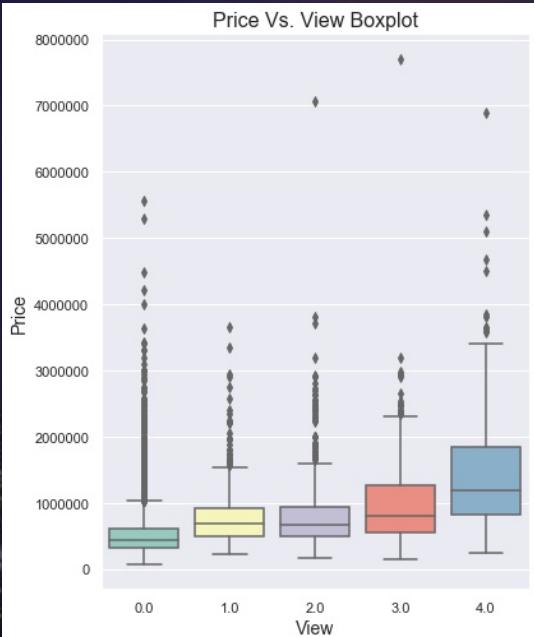
- Model indicates that a 10% increase in an above average grade leads to a 7.66% increase in price.
- Renovated homes tend to have higher values when compared to their peers





What is a view's impact on house prices?

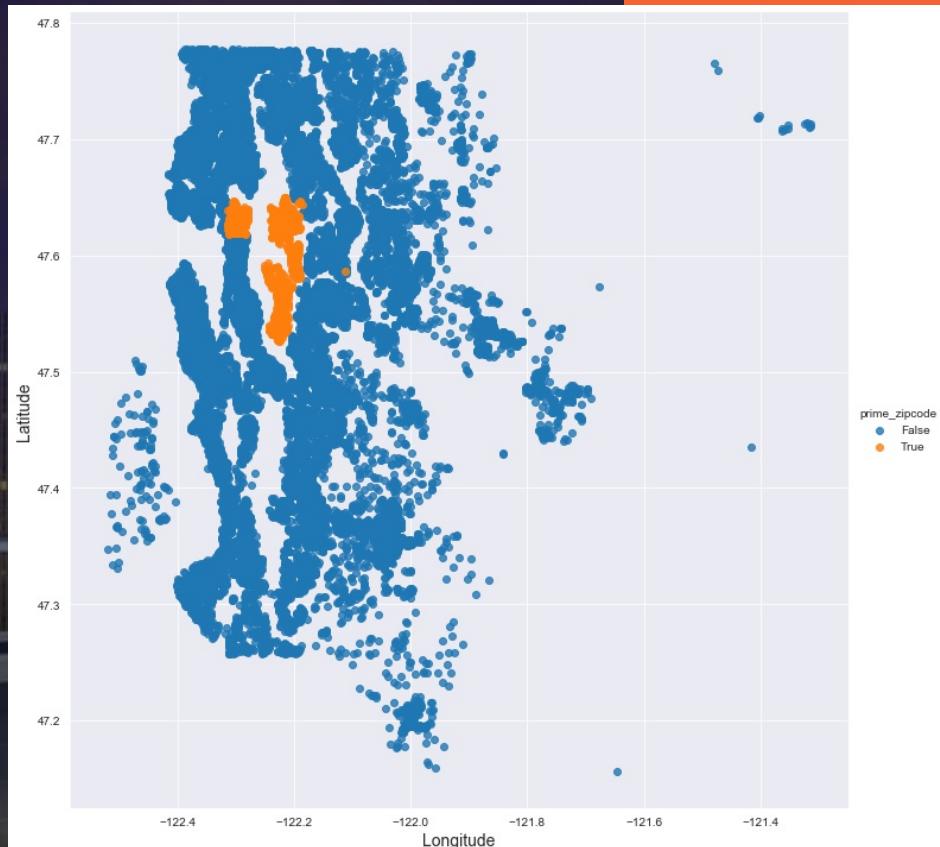
- 10% increase in views 3-4 leads to 7.65% increase in price
- A 10% increase in views 0-2 causes a 3.52% increase in price,





Does Location Matter the Most?

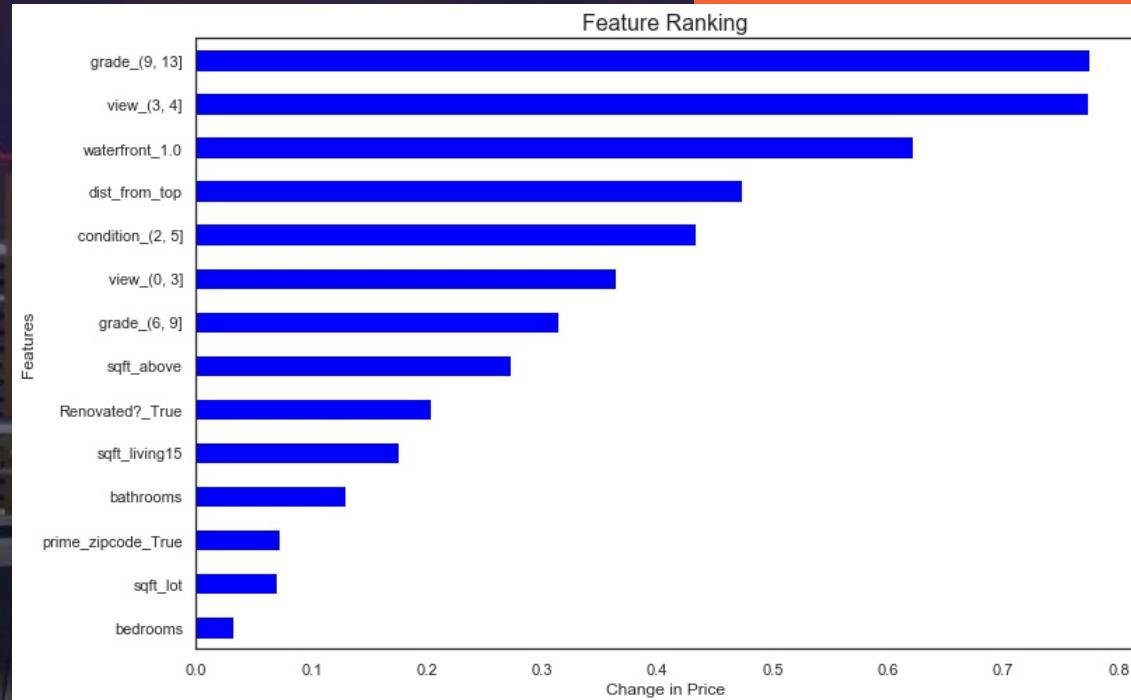
- Determined the top 4 zip codes and their locations
- Found distance of each house from average coordinates of houses in the top 4 zip codes





If Not, What does?

- A 10% increase in distance from the top zip codes causes a 4.61% decrease in price
- Grades 9-13 cause the most change in price
- Square footage is less impactful than expected





Recommendations

Quality

Causes the most change in price when increased

View

Also has a significant impact on price

Location

Being 10% closer to top zip codes leads to 4.86% change in price

Future Work

Develop Scores

Create a quality and view score using the view, grade, renovation, and waterfront predictor variables

Quantifying Location

Improve how the model measured a good location beyond just its distance from the top zip codes.

Incorporate Interactions

Introduce new variables that account for the interactions among predictors



Thanks!

Any questions?

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