King County Housing Sale Price Analysis

Tim Rabbitt

Overview

Kraken Construction is looking for some insight as to what features to include in a new home construction that positively influence sale price, and to what extent.
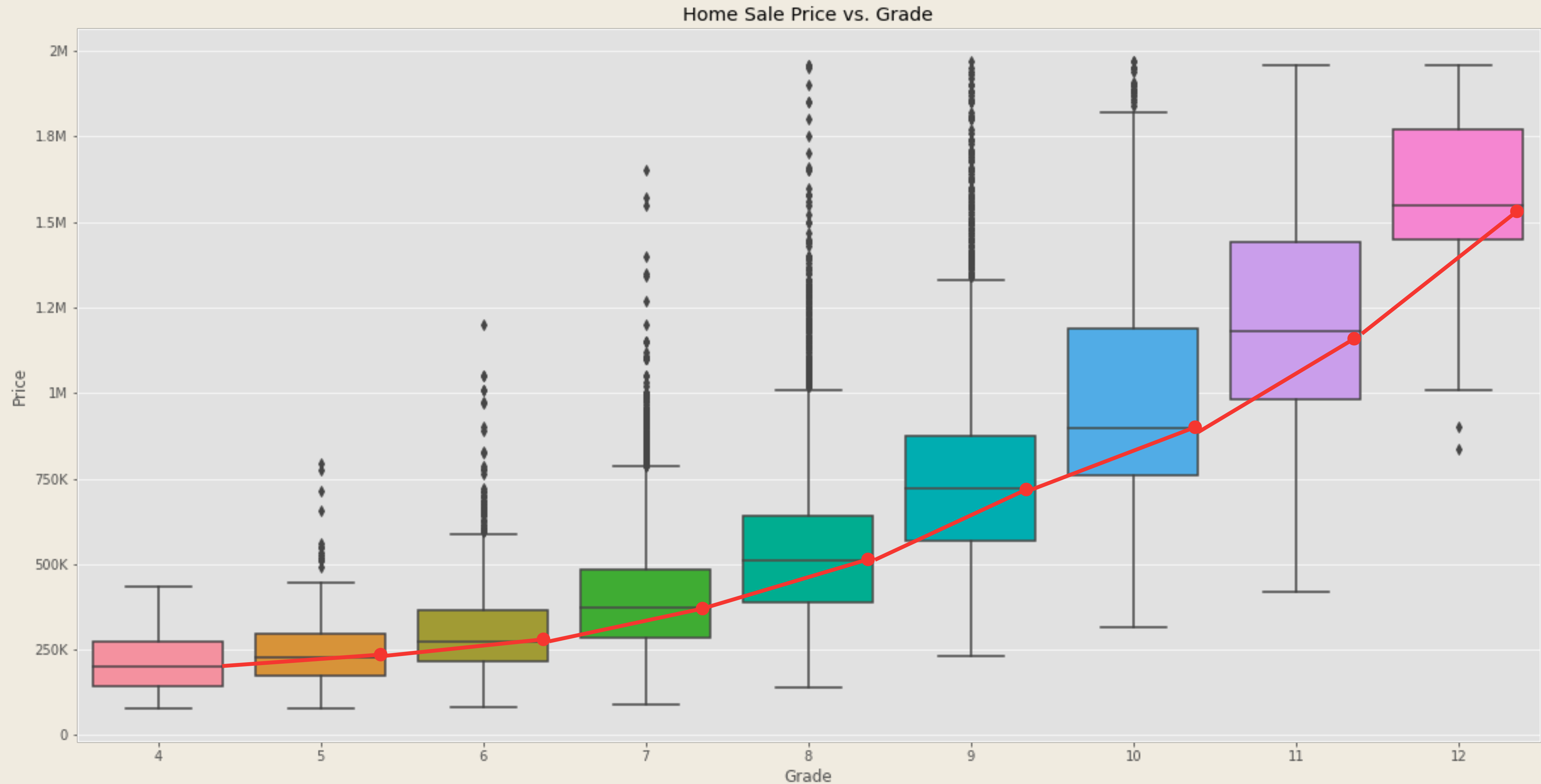
My Job: What features, based on King County home sale prices, should you consider in the construction of a new home?
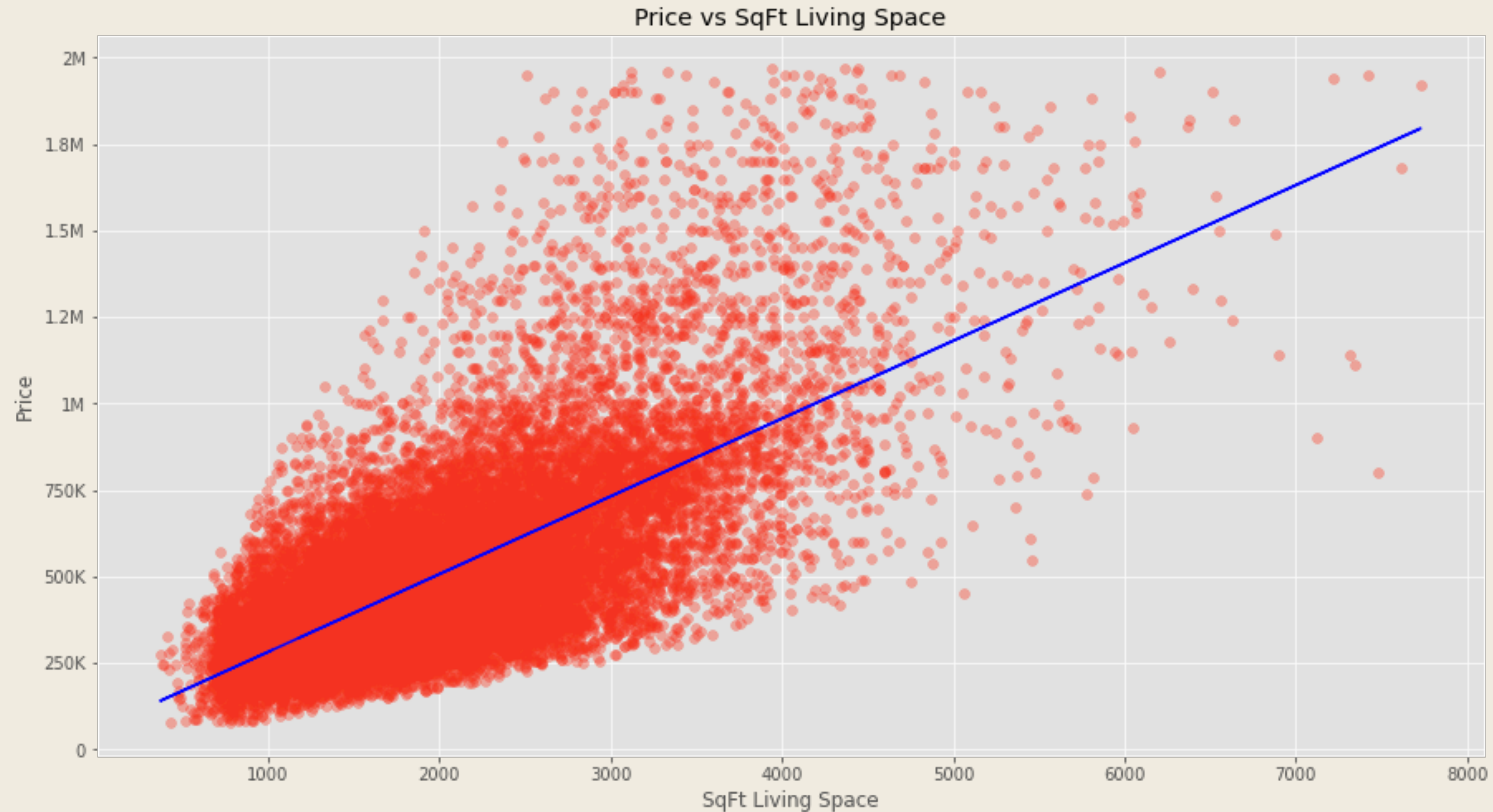
The Data

- Home sales information in King County, WA

- 2014 to 2015

- 21,597 homes
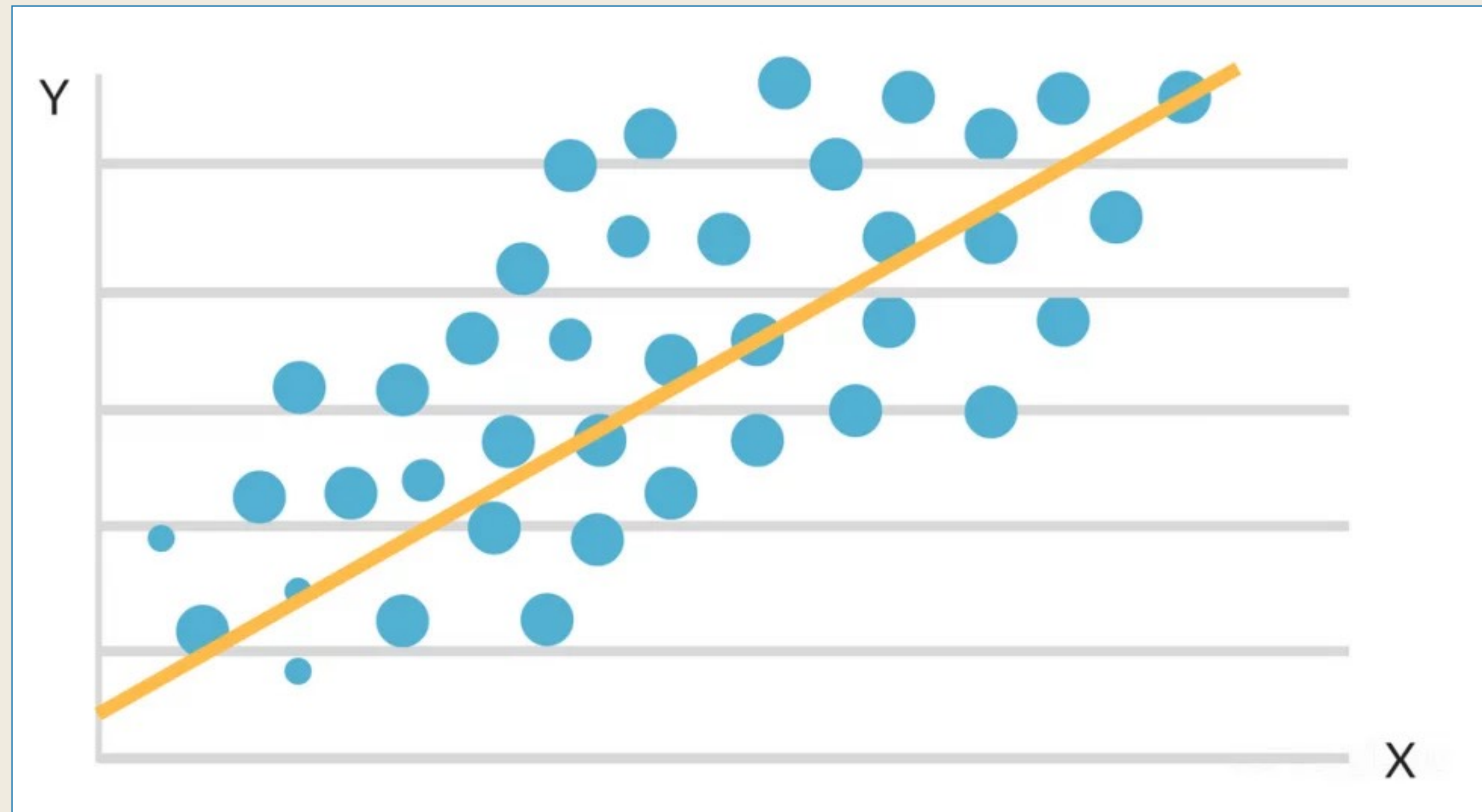
- 20 features

Feature Exploration

Home Sale Price vs. Grade

- Building grade and square footage of living space had the strongest positive correlations with home sale price.

Feature Exploration

Price vs SqFt Living Space

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Regression

- Identifies the features that matter most and how they influence each other.

- Measures impact of features on home sale price

- Helps businesses understand their data and use it to make better decisions

Results

- All features are **statistically significant**

- Model explains **57.4%** of the variation in sale price.

- Some observations:

  - **+1 bedroom** increases home sale price by ~**$11,000.**

  - **+1 floor** increases home sale price by ~**$32,000**

- **My recommendations are....**

1. Find an area to develop that has at least what is considered a 'fair' view. Homes built on these lots see an increase in sale price of:

~126K

2. Homes with a waterfront see the biggest increase in home sale price compared to most other features. Build a house on a waterfront to see an increase in sale price of:

~268K

3. Do not cut costs on building materials, building grade is highly correlated to sale price. Most houses are built with an "average" grade, to increase sale price build with a grade of:

9-"Better"

Limitations and Future Analysis

- Conclusions should be approached with caution:
    1. Model explains only 57.4 percent of the variation in sale price.
    2. Normality assumption was not fulfilled

- Future analysis:
    1. Find data before 2014 and after 2015
    2. Include additional features in future models.

Thank You

Questions?

You can reach me at:

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For a more detailed analysis and the methods behind this presentation, please visit:

https://github.com/trabbitt90/Multiple-Linear-Regression-King-County-Project