

A person stands on a dark, rocky outcrop in the middle ground, silhouetted against the lighter background of a massive, snow-covered mountain. The mountain's peak is partially obscured by a soft, hazy atmosphere. In the foreground, a calm body of water reflects the mountain and the person, creating a clear mirror image. The overall scene is serene and majestic, with a muted color palette of greys, blues, and whites.

King County Housing Market

For Real Estate Agency

Summary

A local real estate agency in King County WA is looking to develop a web tool that would help clients to estimate the sale prices for their homes. Ideally, we would like to include variables that sellers can control such as staging, curb appeal, remodeling, fixture updates, the color of walls, etc. This will provide visibility to sellers on what investments can contribute to the price increase of their house.

The objective of this project is to analyze housing data for King County to provide insights on variables that effect sale price and also determine if there any pricing trends that can project future growth of certain markets.

As an outcome of this analysis we are hoping to get:

Insights for real estate agents:

- Price drivers (predictors)
- Housing market trends based on city



OUTLINE



BUSINESS
PROBLEM



DATA AND
METHODS



RESULTS



CONCLUSIONS

Business Problem



HIGH COMPETITION FROM LARGE
ESTABLISHED AND SMALL REAL ESTATE
AGENCIES IN THE AREA.



LACK OF DIFFERENTIATION.



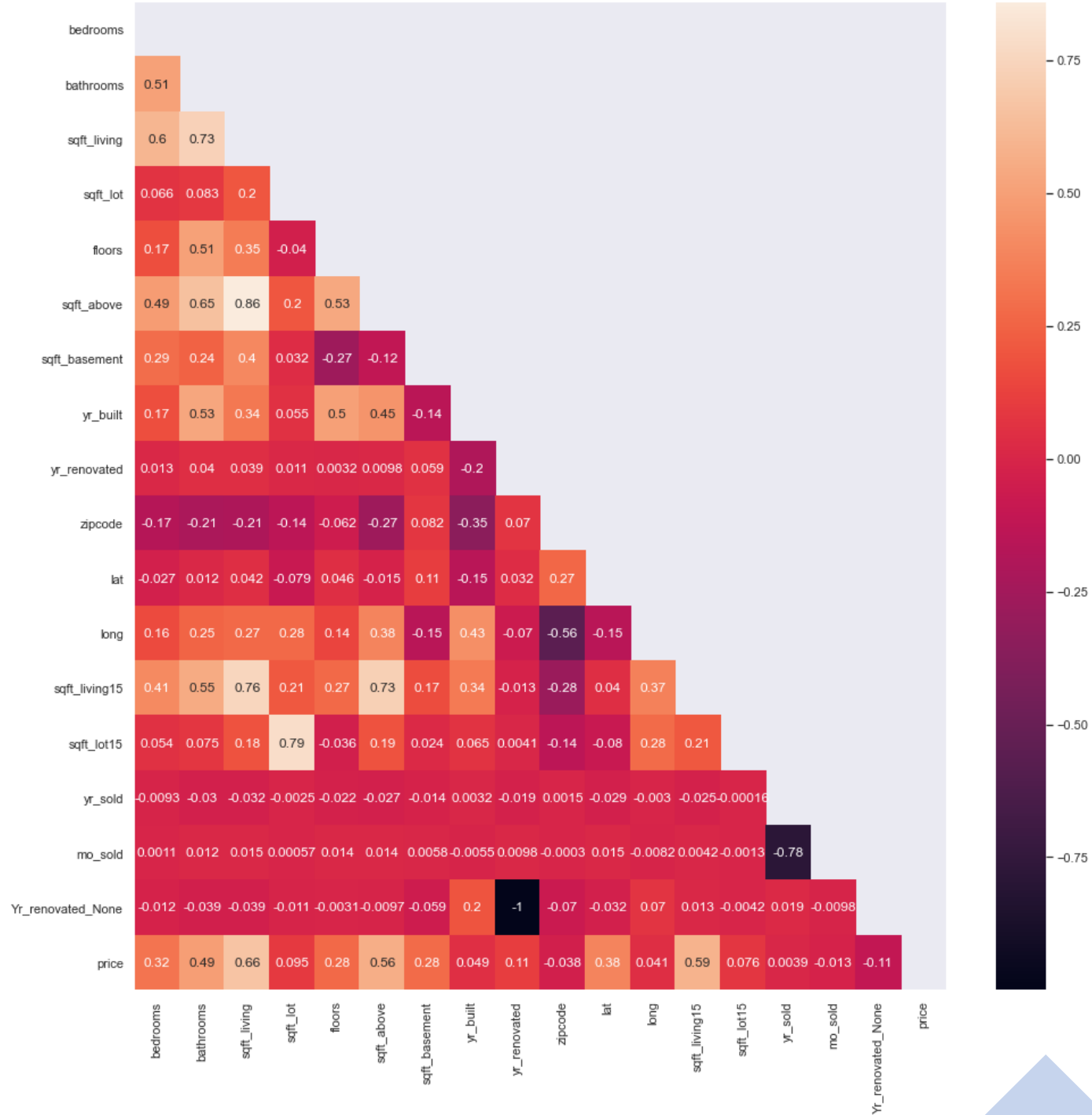
RELYING ON DATA FROM OTHER
SOURCES DUE TO THE LACK OF ITS
OWN DATA.

Data and Methods

- Over 21K data entries of house sales with details on house and lot specs, price, date sold, and whether a house has views and has been renovated.
- Multiple Linear Regression model was used to calculate coefficients for features contributing to price.

Data Sources:

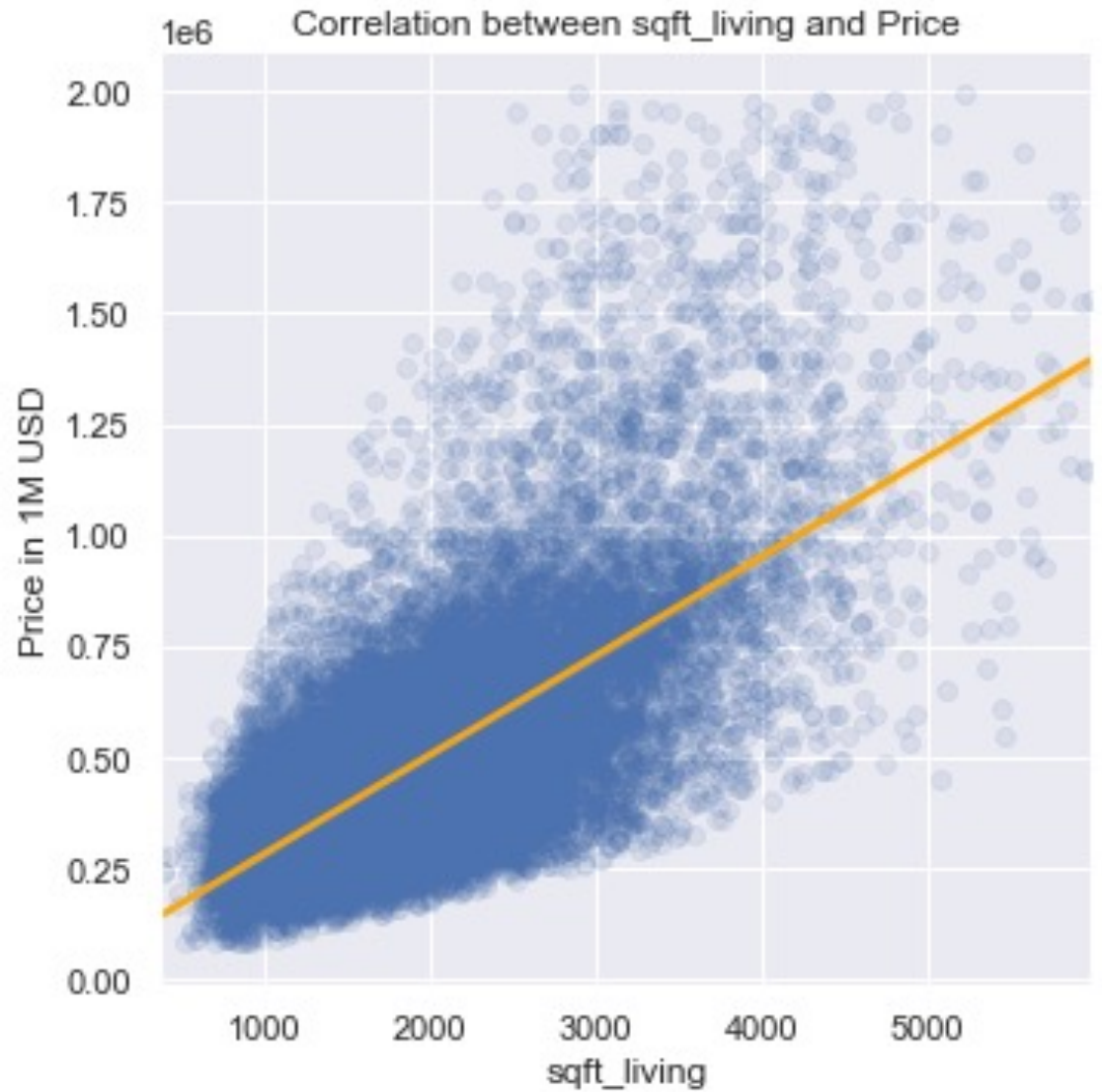
[King County Housing Data](#)
[Zip code list](#)



Correlation
between Features and Price

Results: price based on sqft living

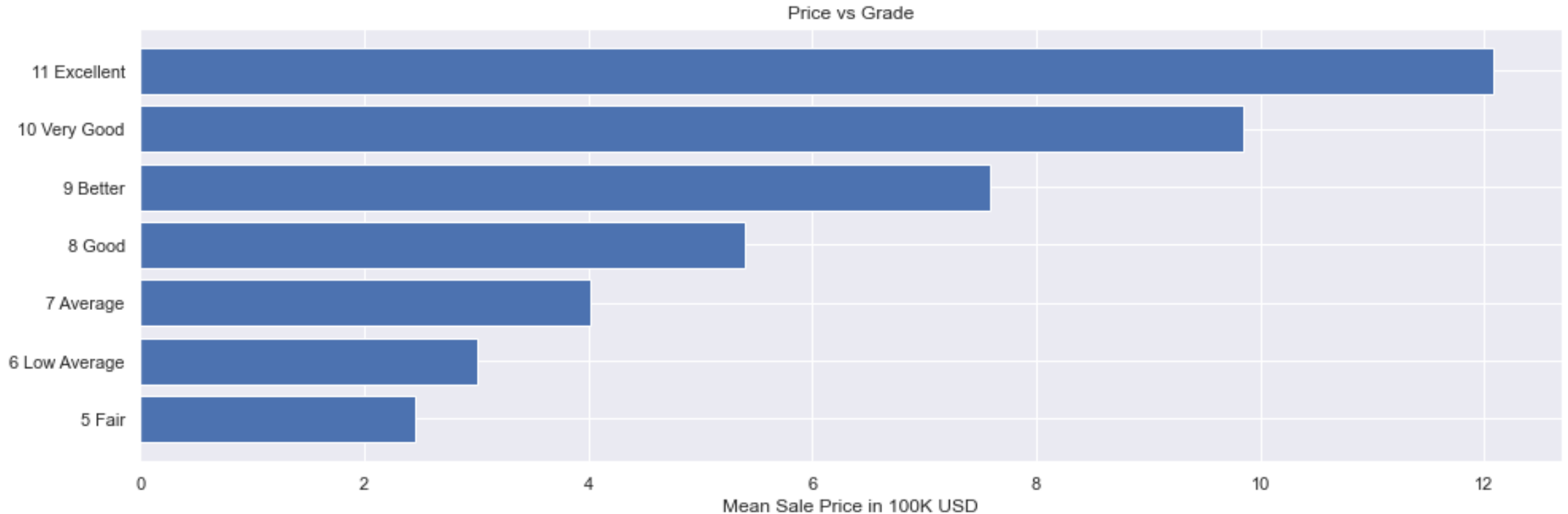
- For every 2/100 percent increase in square feet there is one percent increase in price.



Results: price based on grade

Price change based on a grade in comparison to Very Good:

- +6.6% Excellent
- 7% Better
- 22.7% Good
- 38% Average
- 56.7% Low Average
- 64.4% Fair



Results: price based on condition

Price change based on condition in comparison to Average:

-13.8% Fair
+6.7% Good
+16% Very Good

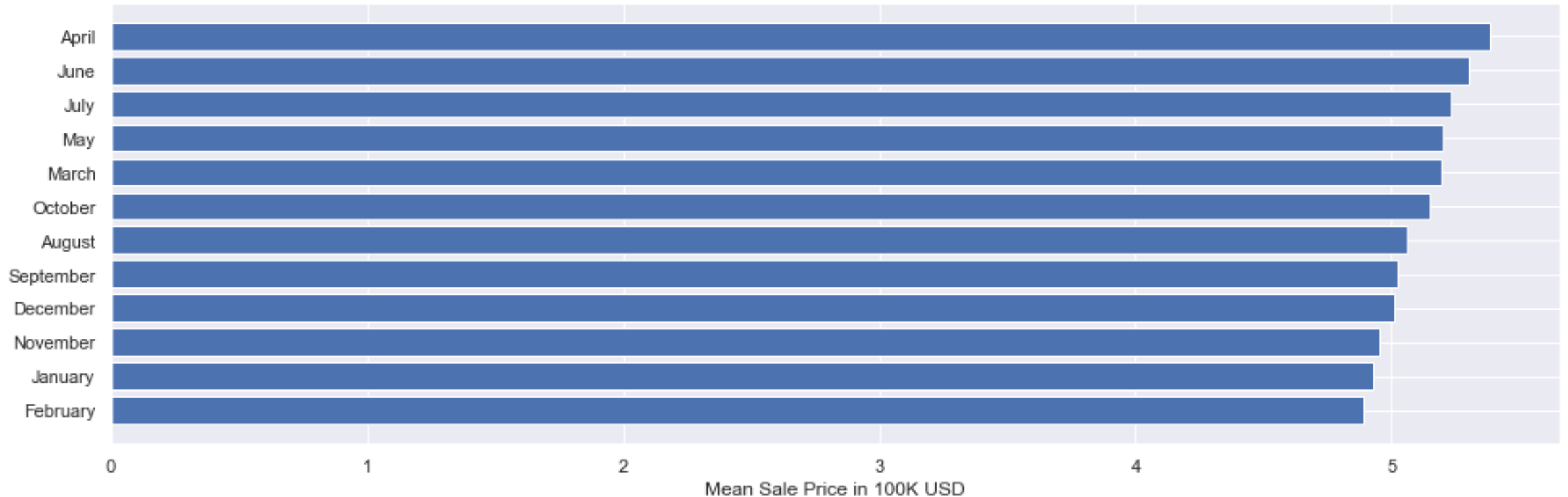


Results: price based on month sold

Price change based on a month in comparison to January:

+ 4.2% March	+ 8% August
+6.1% April	+8.3% September
+7.8% May	+9% October
+9.5% June	+8.2% November
+8.5% July	+7.9% December

Price vs Month

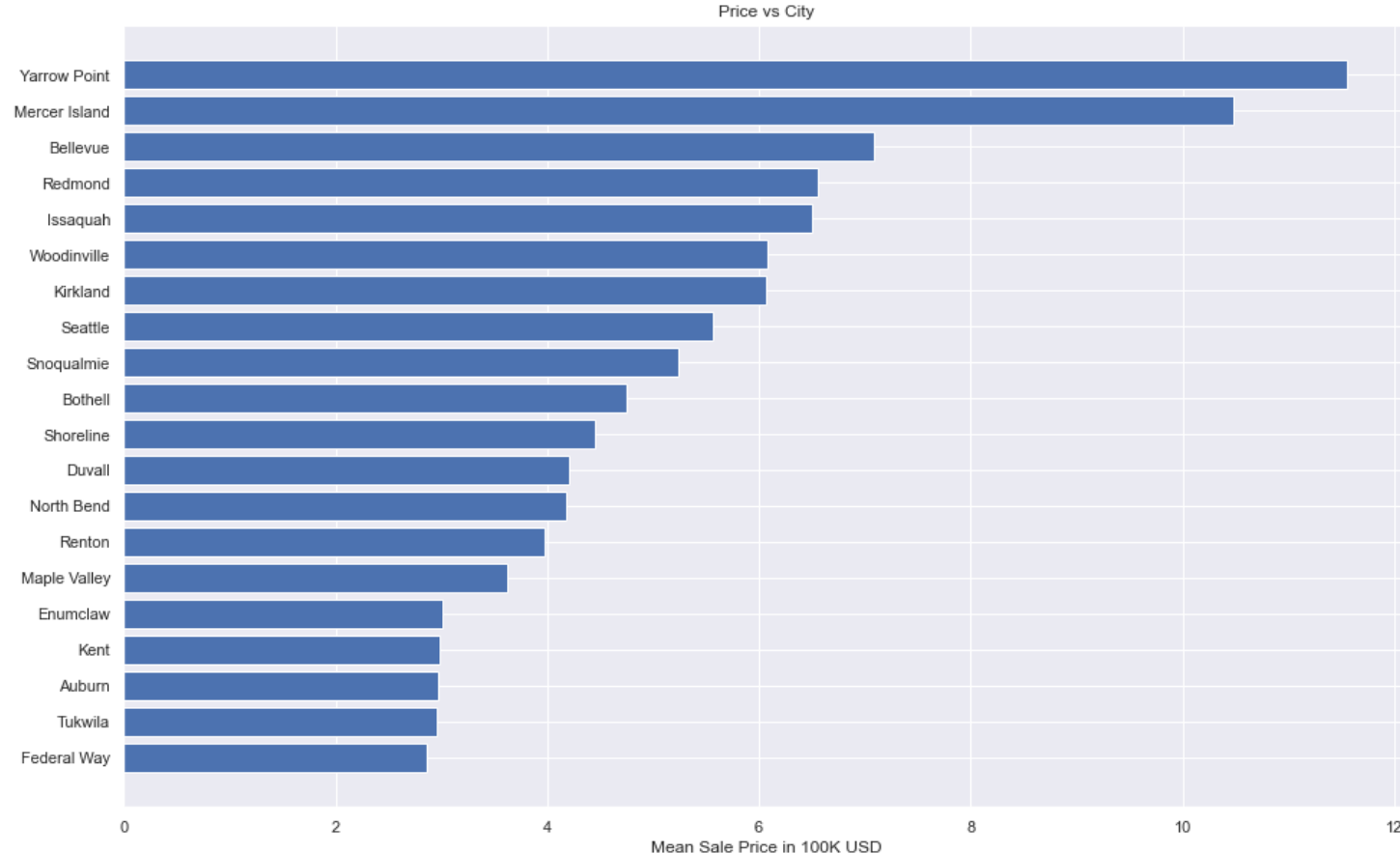


Results: price based on city

Price change based on a city in comparison to Auburn is:

+64.1% Bellevue
+42.3% Bothell
+35.2% Duvall
+9.7% Enumclaw
+53.7% Issaquah
+5.1% Kent
+63.5% Kirkland
+17.8% Maple Valley
+85.8% Mercer Island

+36.5% North Bend
+58.2% Redmond
+24.5% Renton
+64.7% Seattle
+46.8% Shoreline
+42.2% Snoqualmie
+18.2% Tukwila
+48.2% Woodinville
+108.6% Yarrow Point



Recommendations for sellers

Perform maintenance and upgrades to increase price by up to 16% (from Average to Very Good).

Renovate a house to increase the price by up to 71% (ex. renovating a house from Fair to Very Good grade will increase the value by 64%).

Sell a house in summer to early fall months for up to 9.5% higher in price. Best months to sell are June and October.

Houses in cities south of Seattle sell for at least 20% lower compared to houses West and North.

Next Steps



To acquire additional feature information (such as staged or not staged, fixture updates, curb appeal, color of interior and exterior walls, etc) regarding houses sold.



To get more recent house data through APIs (redfin API) to understand Housing Market trends in the past 20 years.

Thank you!

- [Link to notebook](#)