

3 Nation Consultant Company Presents

# Real Estate Price Model

King County

For The Every Door Real Estate Team


Featuring:  
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Roger Pineda  
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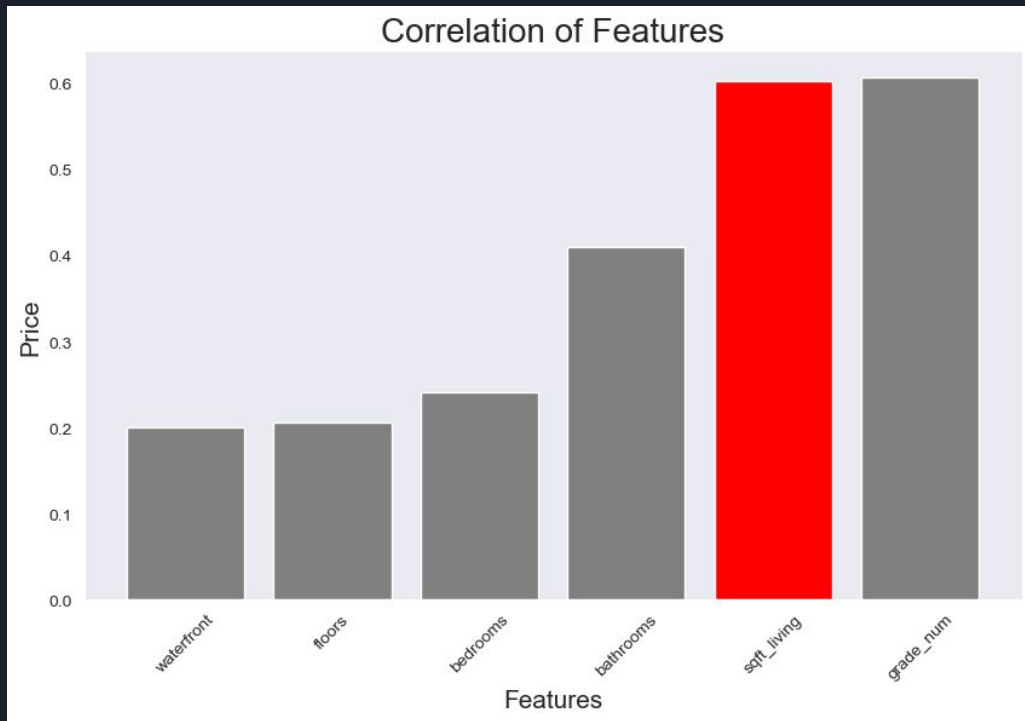
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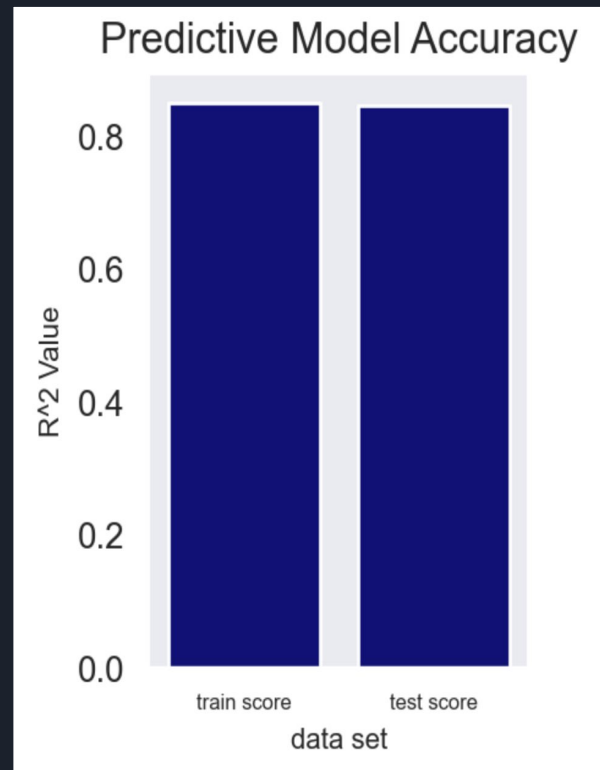
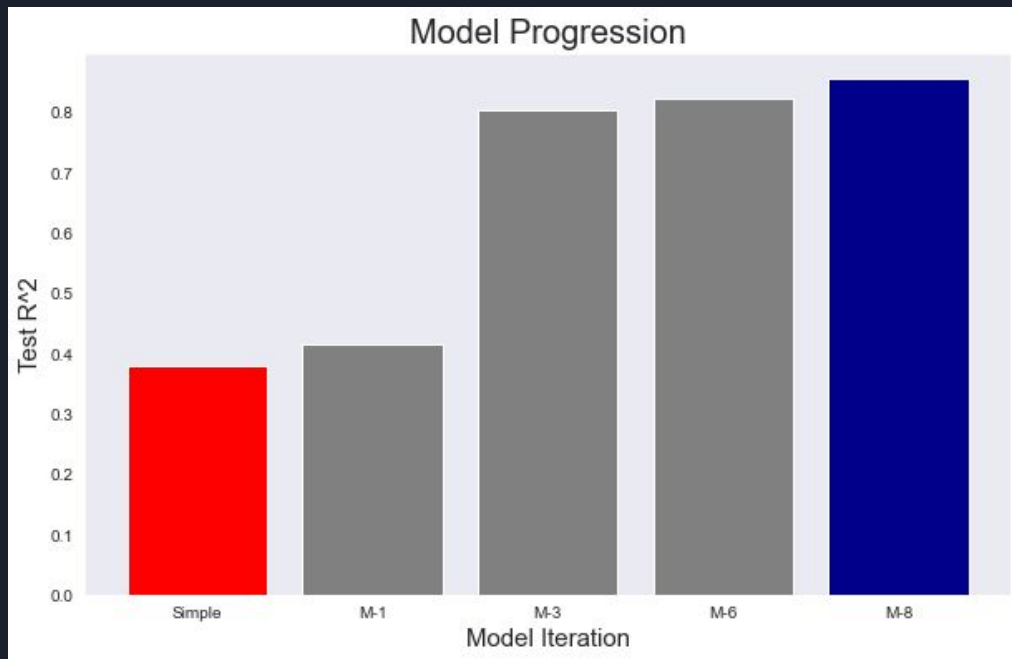


# Overview

- Data Understanding
  - King County House Sales (2014-2015)
- Question
  - What features impact housing prices the most?
- Task
  - Generate predictive model
  - Generate inferential model
  - Analyze impact of features

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- Strongest Correlation: Total Sqft
  - Value: 0.6
  - Sqft used in simple regression





- Difference = 0.003

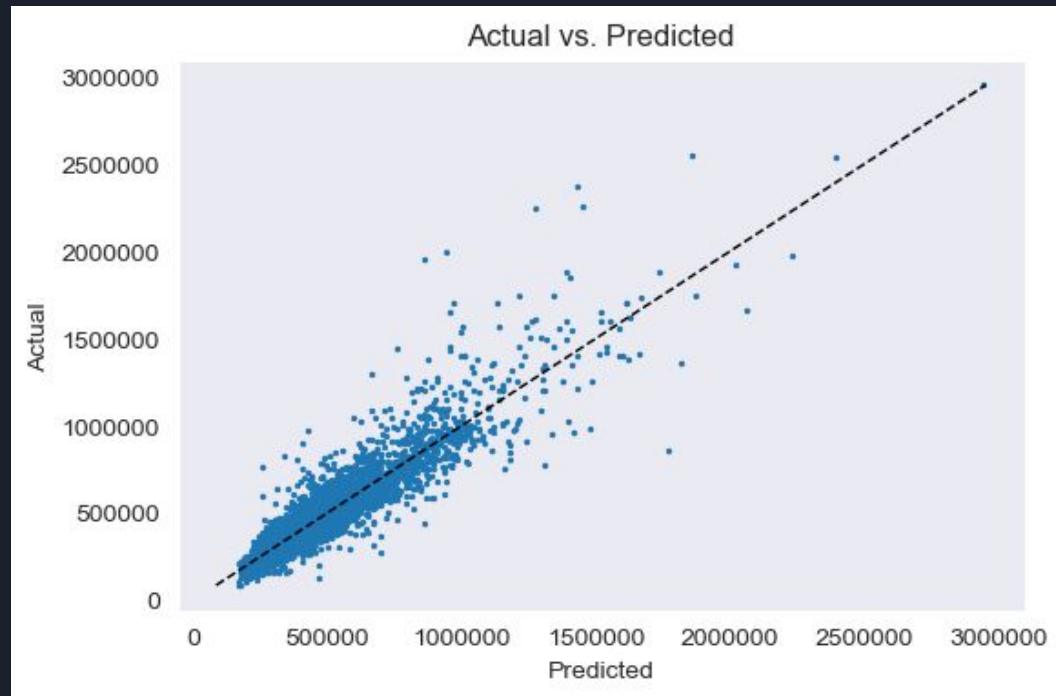
# Predictive Model(M-8)

## Features Included

- Sqft\_living (StandardScaler)
- Waterfront
- Basement
- Zip Code
- View (None, Average, Fair, Good, Excellent)
- Condition Number
- Number of Floors
- Number of Bathrooms
- Number of Bedrooms
- Grade

## Predicts the log of price

- Train  $R^2 = 0.859$
- Test  $R^2 = 0.855$



RMSE = \$105,546

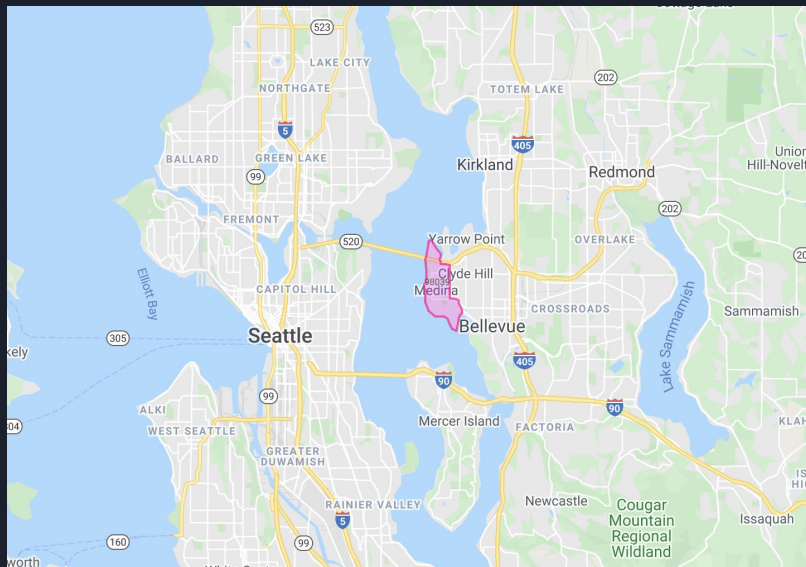


# Inferential Model Results

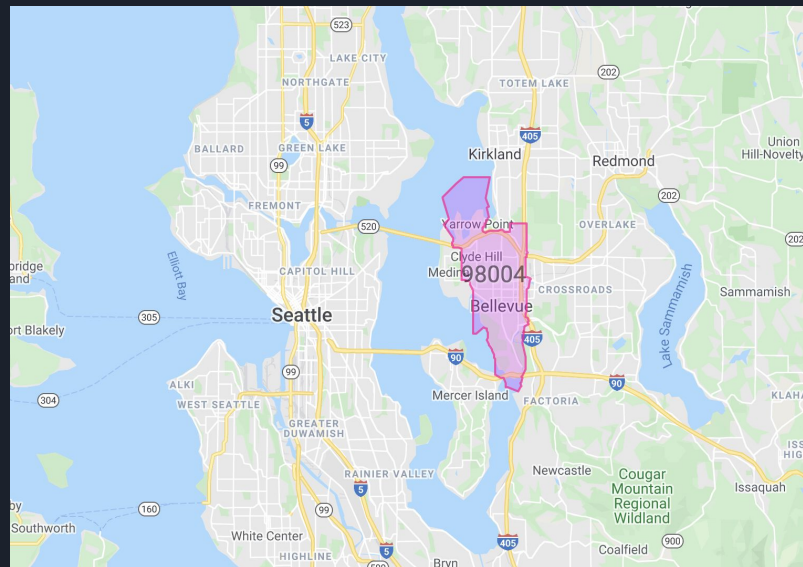
- Adjusted R-squared = 0.780
- Included Features:
  1. Square feet
  2. Waterfront (Y/N)
  3. Zip Code
  4. View

# Feature Recommendations

## Zip Code



zipcode\_98039: \$1,400,000 ▲



zipcode\_98004: \$830,000 ▲



# Feature Recommendations

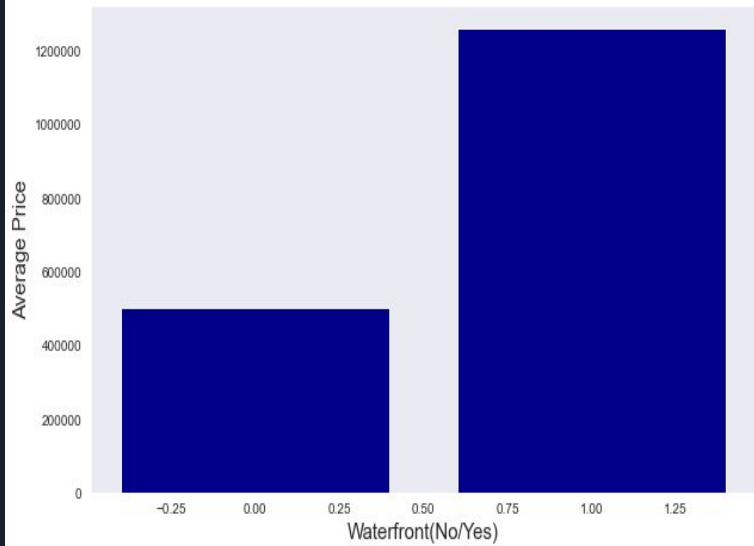
## Other

- Waterfront Property:
  - \$379,400 ▲
- View:
  - Excellent: \$269,600 ▲
  - Good: \$93,090 ▲
  - Fair: Not significant
  - Average: Reference
  - None: \$91,010 ▼
- Square Footage Living Space:
  - \$179 ▲ per sqft

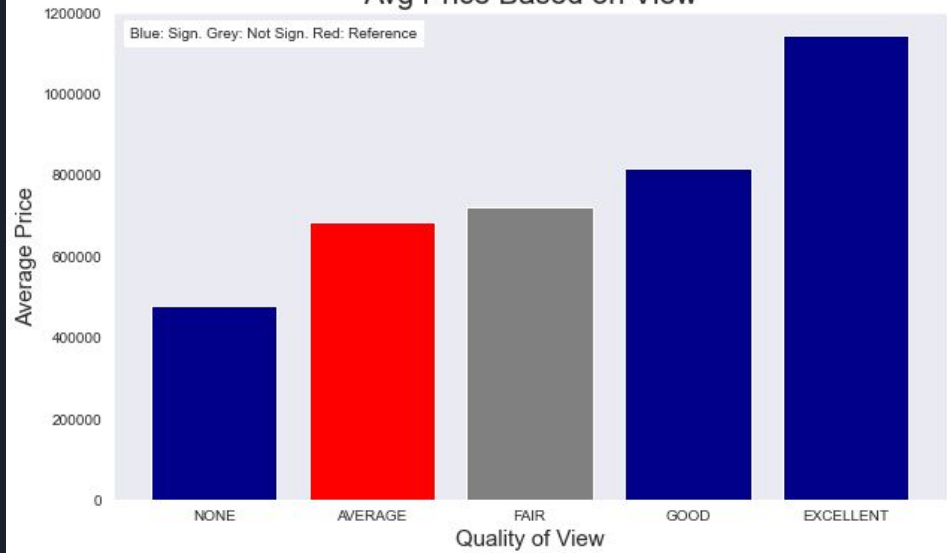




Presence of Waterfront



Avg Price Based on View





# Next Steps

- Relationship b/t zip code and price
  - Tease out underlying factors
- Investigate potential feature engineering
- Utilize different regression model
  - Non-linear

# Thank You!

## Questions?



IMAGE: SHUTTERSTOCK BY MIHAI ANDRITOIU

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