

KING COUNTY REAL ESTATE

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OVERVIEW



Business Problem



Data & Methods



Results



Recommendations

BUSINESS PROBLEM

Stakeholders:

- First time home buyers
- Home-sellers
- Folks in the tech industry

Analysis Questions:

- What are the aspects/features that best determine the price of a home?
- When's the best/worst time of the year to buy/sell a home, in terms of price?
- Is there a relationship between house price and the distance from downtown Seattle and downtown Redmond
- Which features are strongly related with each other?



DATA & METHODS

- The King County Housing Data Set contains information about the price, size, location, condition and other features of houses in the Washington's King County area.
- After data cleaning:
 - 21,597 house sales between May 2014 – May 2015
 - 21 variables

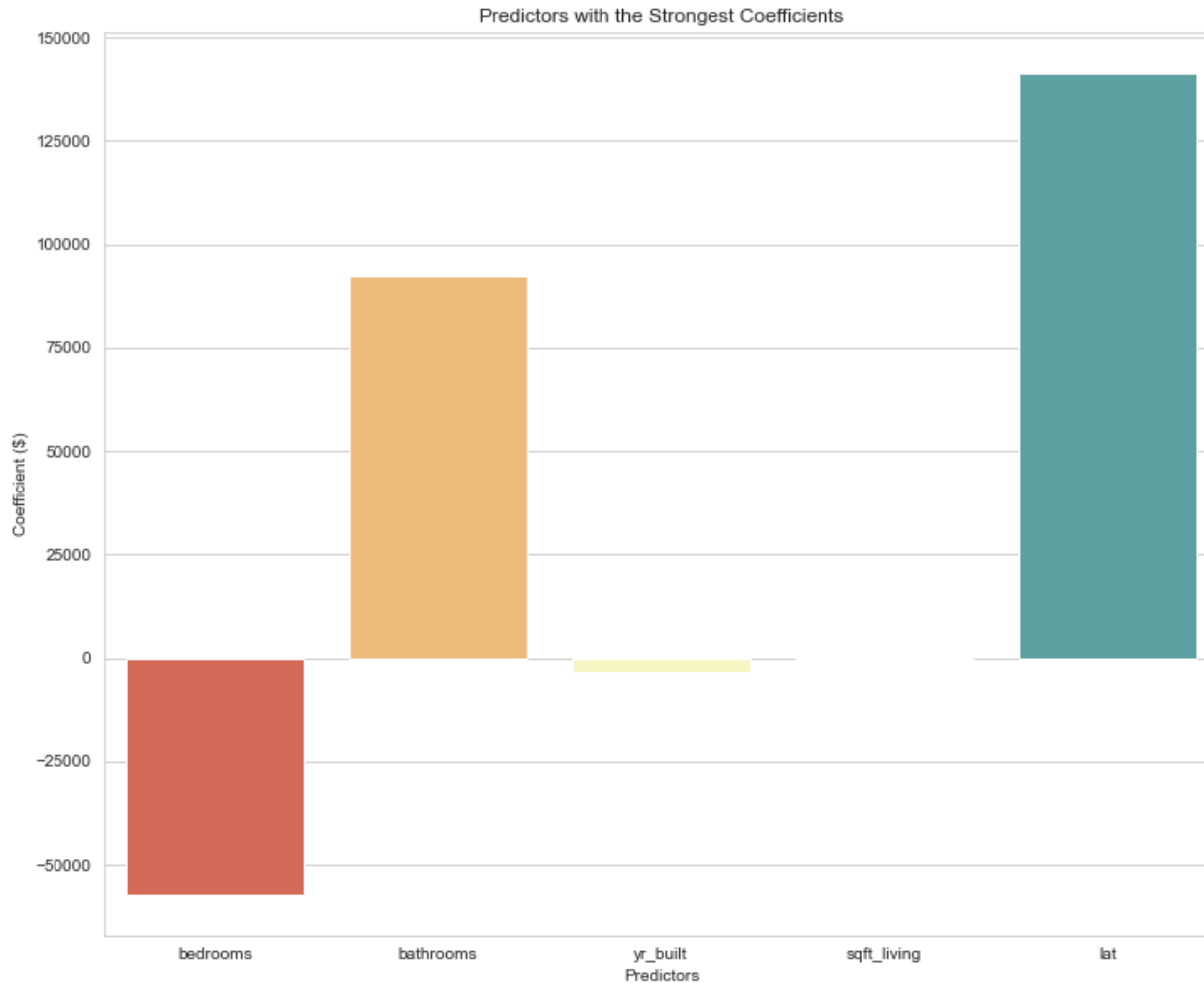
SUMMARY

The total square footage, grade and latitude are the best predictors of a home price in King County.

The best time to sell a home is in late spring/early summer

There is a negative association between home price and the distance from downtown Redmond and Seattle, meaning that the home prices went down further from downtown.

INFERENCE MODEL

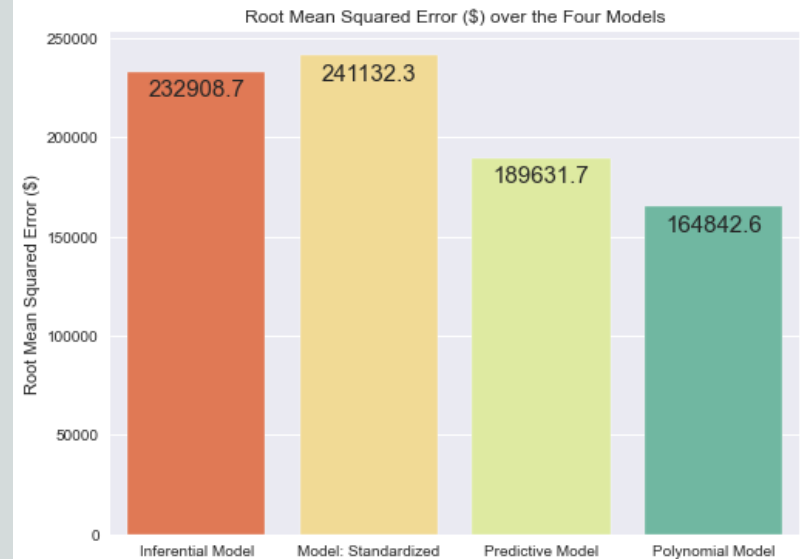
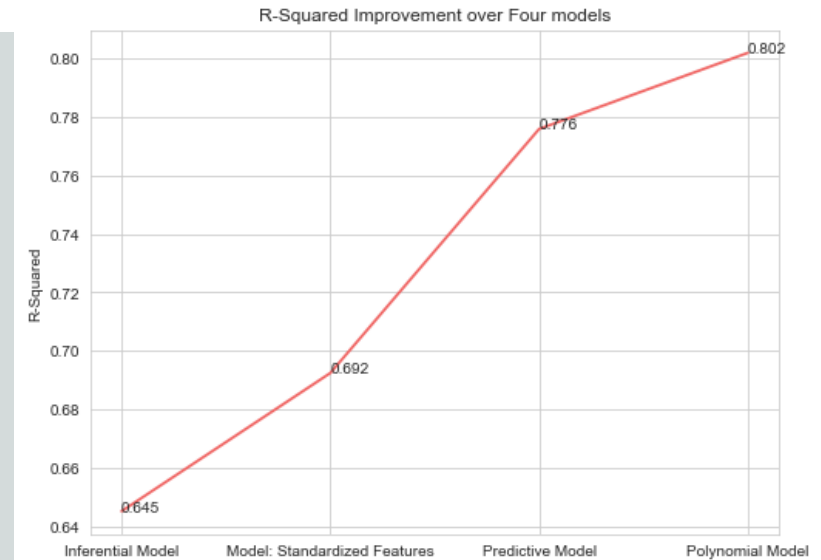


- The further up north in King County the home is located, the higher the price of the home with a coefficient of **\$141,214** with each increase of latitude
- Each additional square footage of living space in the home is associated with an increase of **\$249** in price

R-SQUARED IMPROVEMENT OVER THE FOUR MODELS

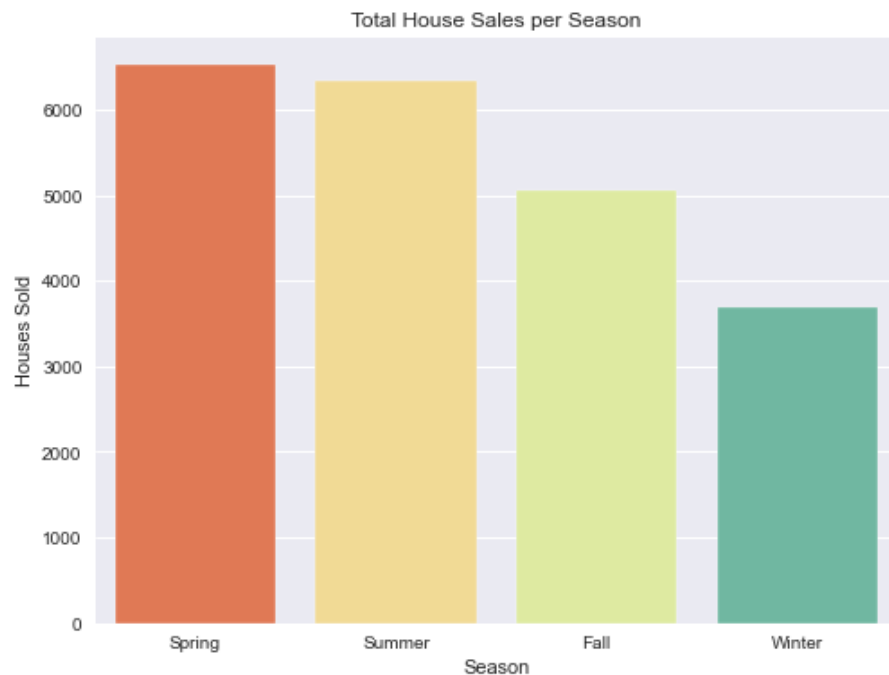
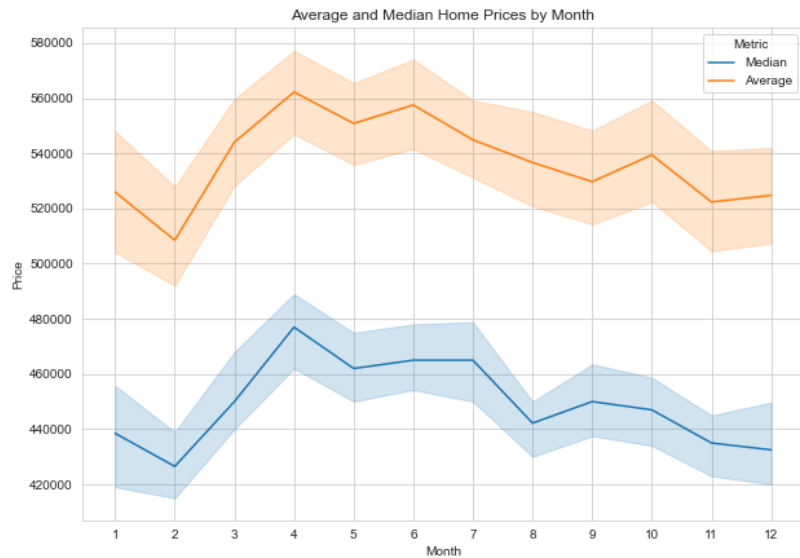
The final model can account for about **80.2%** of the variability in price and the test root mean squared error is **\$164,842**.

Our metrics for R-squared and RMSE have improved over iterations from our basic model to our final model, allowing us to predict better results each time.

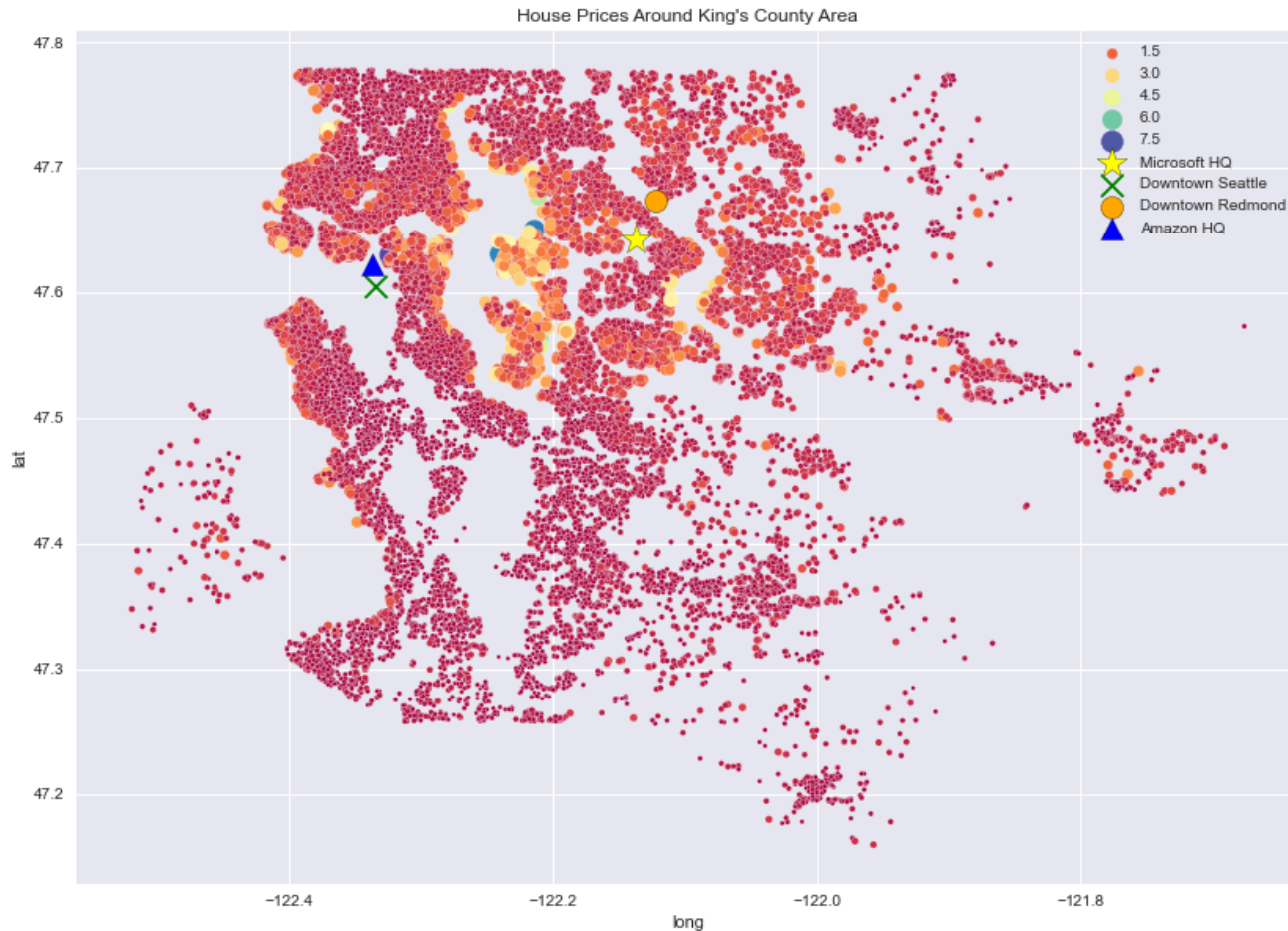


HOME PRICES BY MONTH/SEASON

- Average and median sale prices were the highest between April-June, while the opposite is true between November-February
- Housing price can be affected by time/season

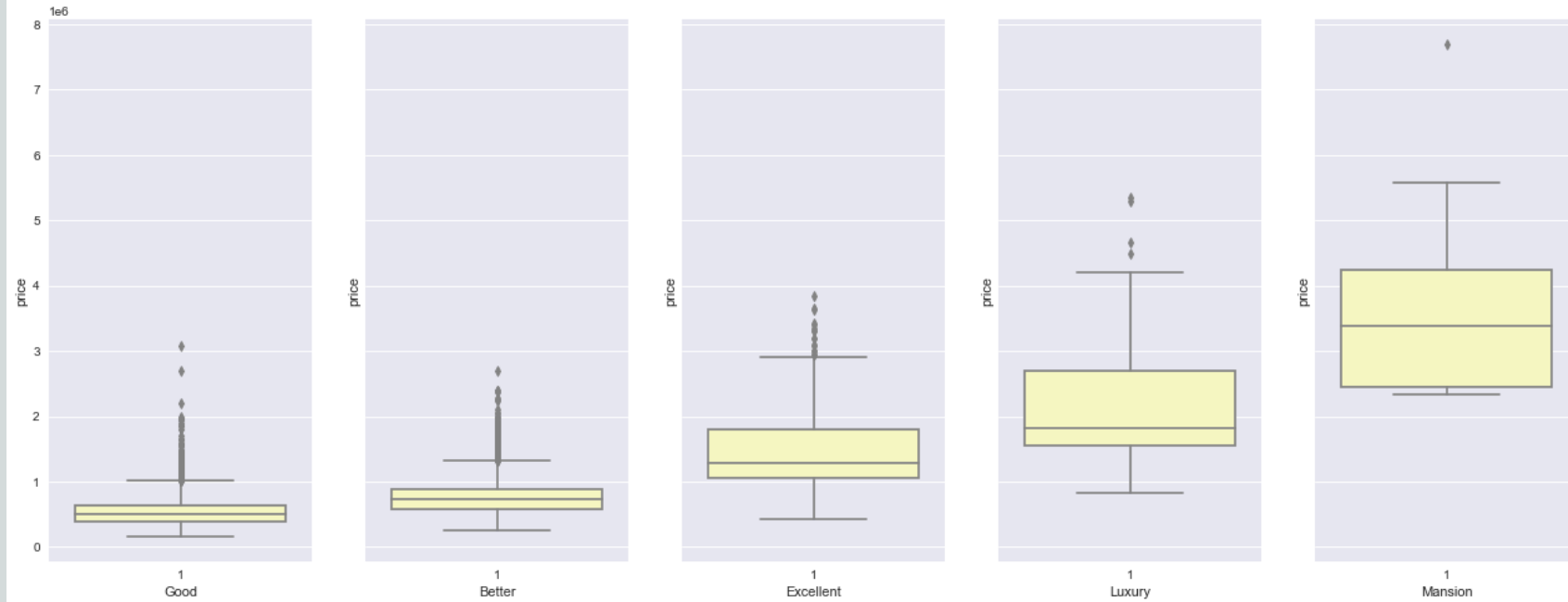


GEOGRAPHICAL FACTOR



- **Higher Prices:**
 - Houses between downtown Seattle and downtown Redmond tend to have higher prices
 - Tend to be clustered
 - Near water area
- **Lower Prices:**
 - Tend to be spread out
 - Houses in the southern part of King County have lower prices

HOME QUALITY



- Houses with grade equal to or higher than 9 have higher prices than the others

RECOMMENDATIONS

For Homebuyers:

- *Square footage of living space* - To save money, consider purchasing a home with less square footage
- *Age of the home* - Look into purchasing older homes as they tend to be less expensive the older they are.

For Home-sellers:

- *Building Grade* - Fix up the house by improving quality of materials when buying and re-modelling to sell at a higher price later on

For those in the tech industry:

- *Geographical Factor* - Look at homes outside of the downtown areas for more affordable homes

THANK
YOU!

- Feel free to reach out to us if you have any questions

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QUESTIONS