

King County Housing Analysis



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Agenda

- ❖ Business Understanding
- ❖ Data Understanding
- ❖ Our Research
- ❖ Research Results
- ❖ Conclusion





Business Understanding



Our team was hired to explore King County in Washington & what factors contribute to the price.

What we see?

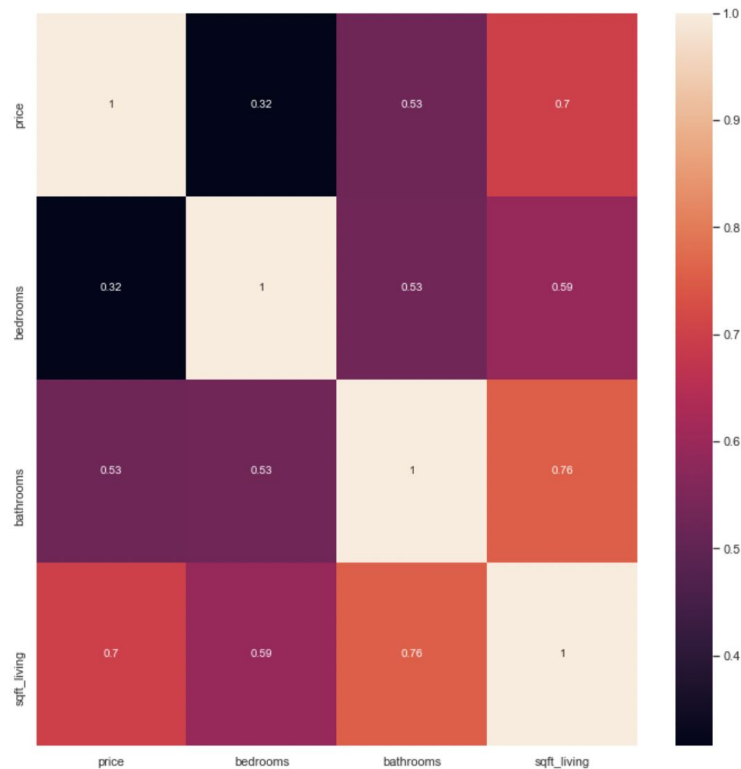
- ~ 24,000 homes on the market
- Median home price of \$450,000
- Mean home price of ~ \$360,000

What we want to see?

- The most important features that correlate to home price.

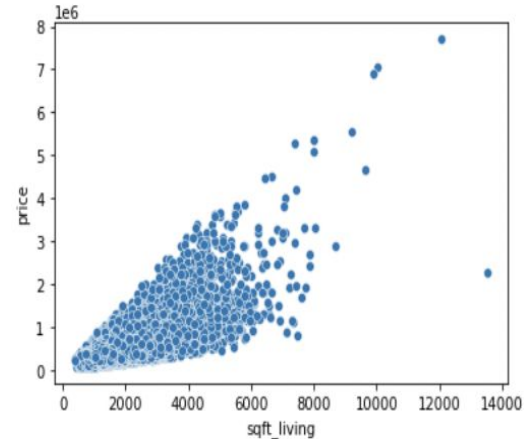
Real Estate Features That Influence Price:

- Price
- Bedrooms
- Bathrooms
- Square foot living
- Square ft lot
- Floors
- Waterfront
- View
- Grade

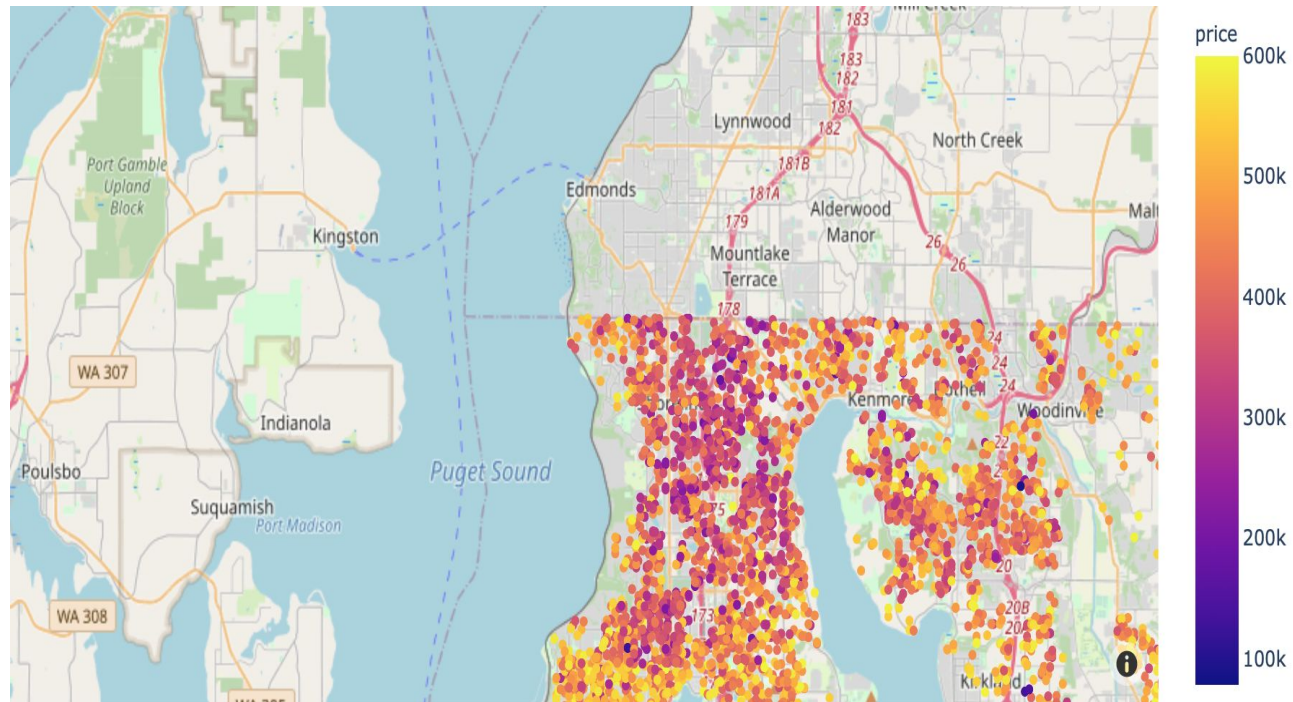


What Our Data Can Answer?

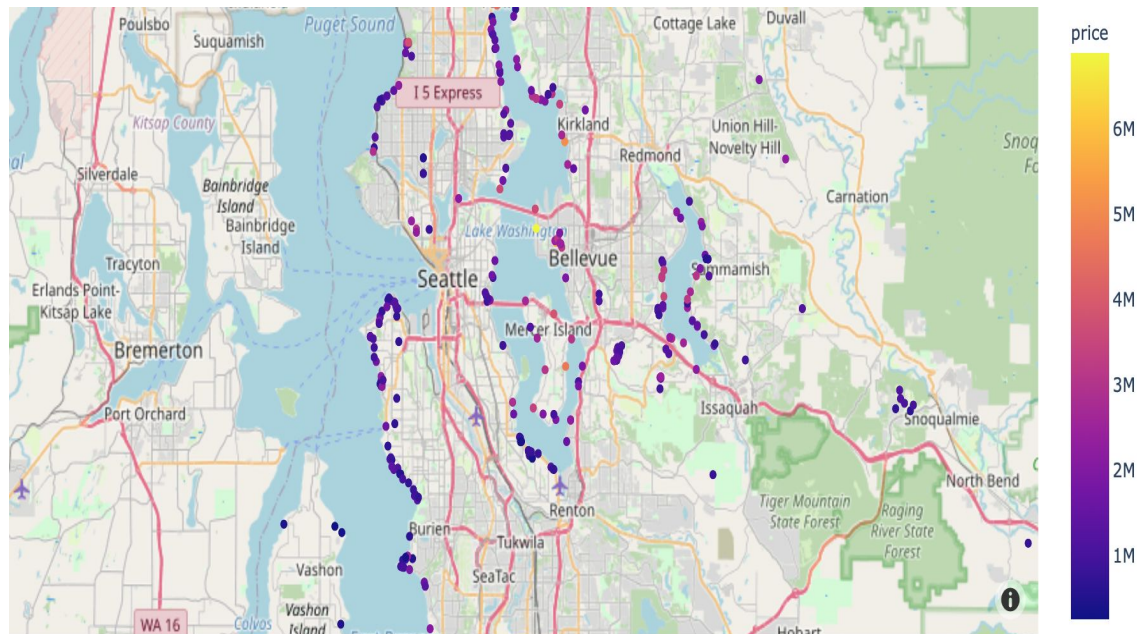
- How house prices related to square foot living?
- Does number of bedrooms & bathrooms affect the price?
- How does factors such as grade, condition, and view affect price?
- Do people care about the year a house was built in?
Does it affects the cost?



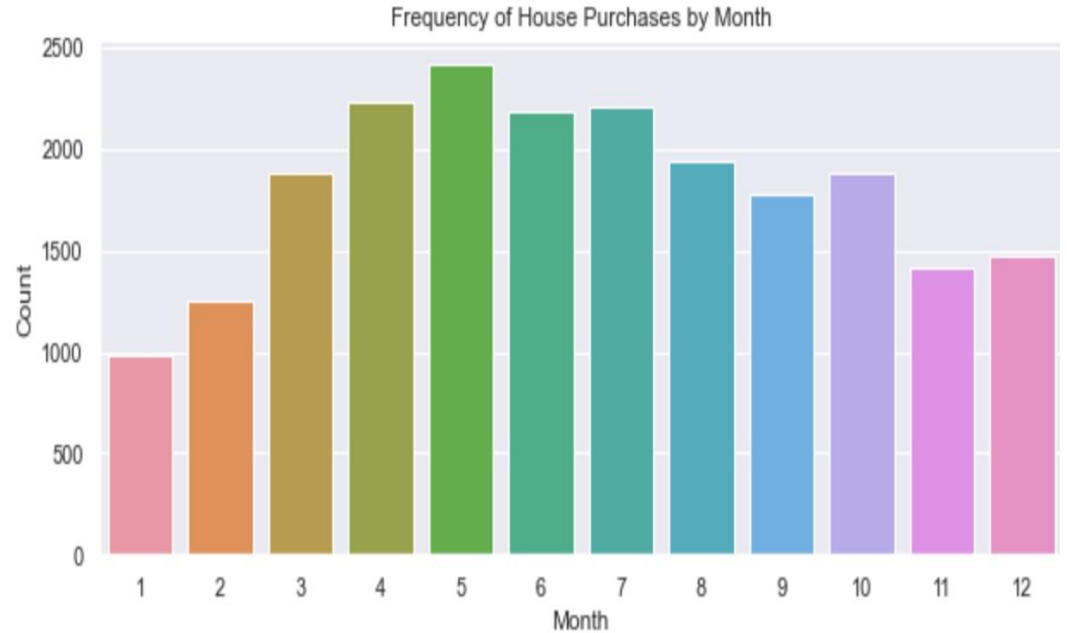
Houses with Median prices:



Houses
with
Excellent
views.



House Purchases by Month.



Modeling:

Predictive model:

Model:

- Factors like influence of sqft_living, bedrooms, and/or bathrooms on price are evaluated.
- This second model is be built on top of Model 1
- Explained variance: 61%

Regression Results

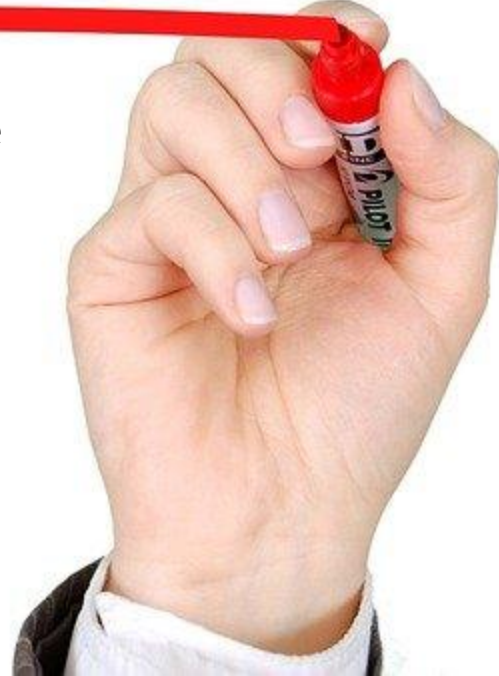
- Our regression results show significant improvement on our metrics.
- Model 1 concluded that sqft living is the most correlated factor when it comes to price.
- Model 2 performed better than Model 1.

- **Model 1:**
 - R2: 0.54
 - RMSE: 248717
- **Model 2:**
 - R2: 0.61
 - RMSE: 22716.2



CONCLUSION

- Our model concludes bathrooms & bedrooms are collinear which contribute to higher sale prices.
- The higher the grade of a house, the higher the **price**.
- Features like waterfront & view contribute to a higher price.





THANK
YOU