

# 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

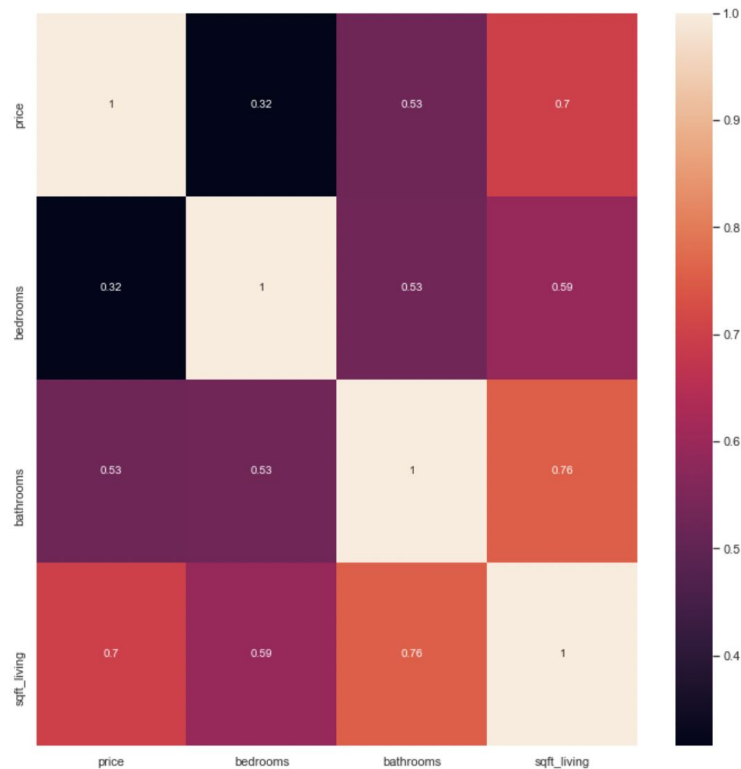
## **What we want to see?**

- The most important features that correlate to home price.



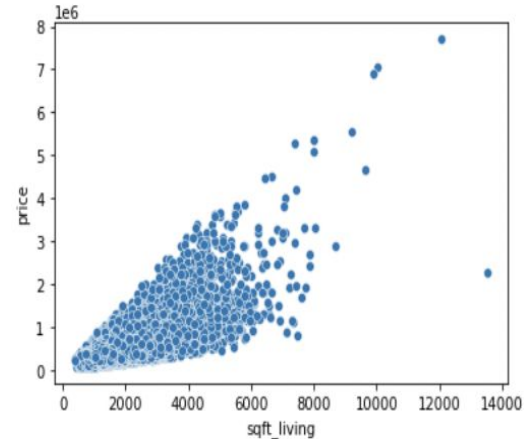
# Real Estate Features That Influence Price:

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

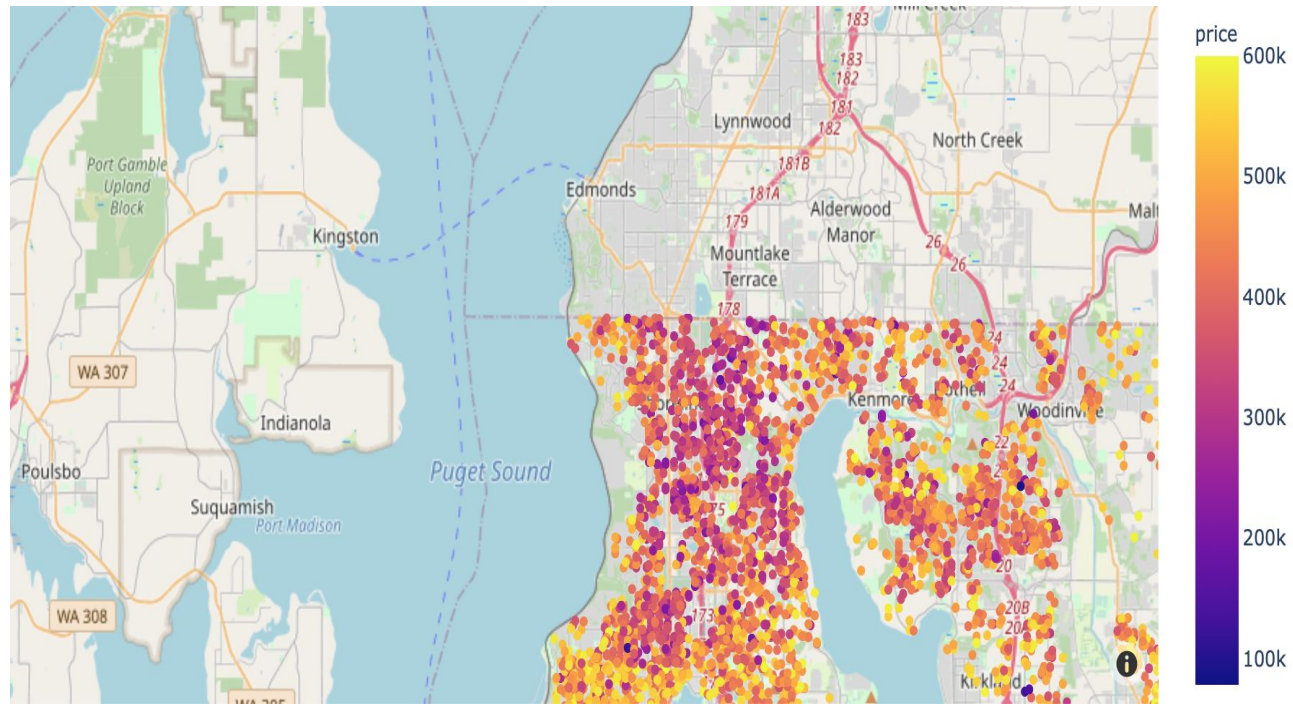


# What Our Data Can Answer?

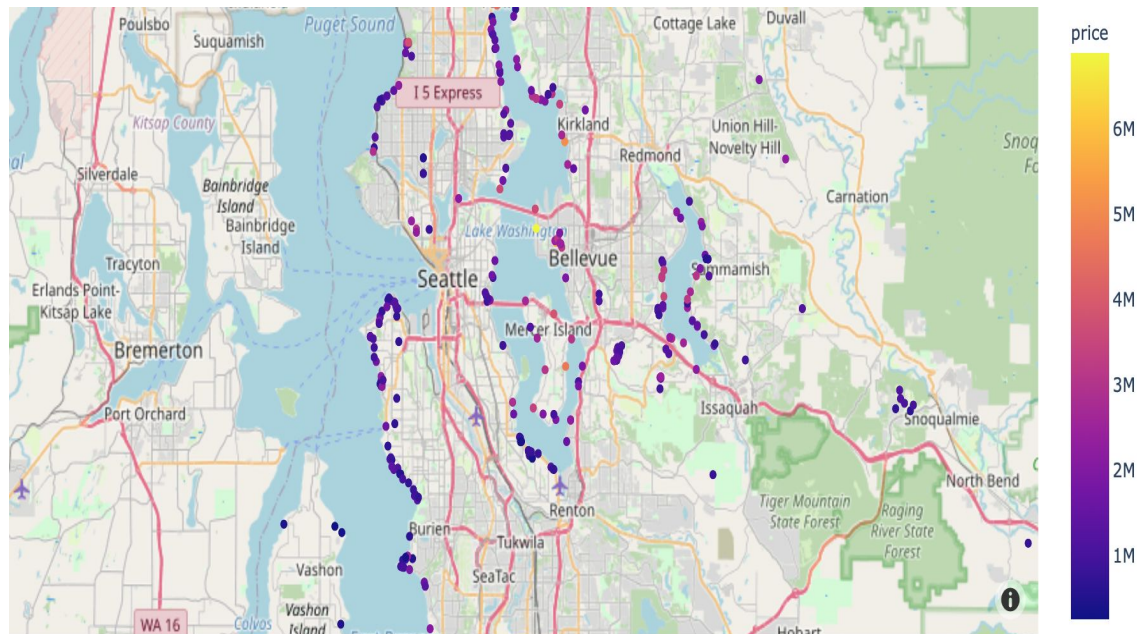
- How house prices related to square foot living?
- Does number of bedrooms & bathrooms affect the price?
- How does factors such as grade, condition, and view affect price?
- Do people care about the year a house was built in?  
Does it affects the cost?



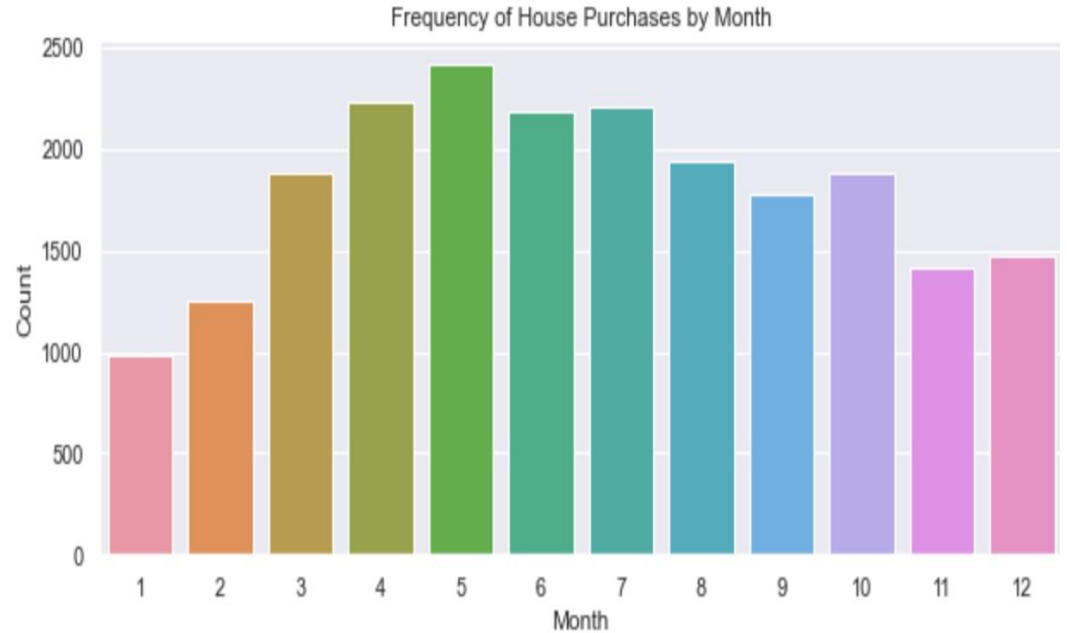
# Houses with Median prices:



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

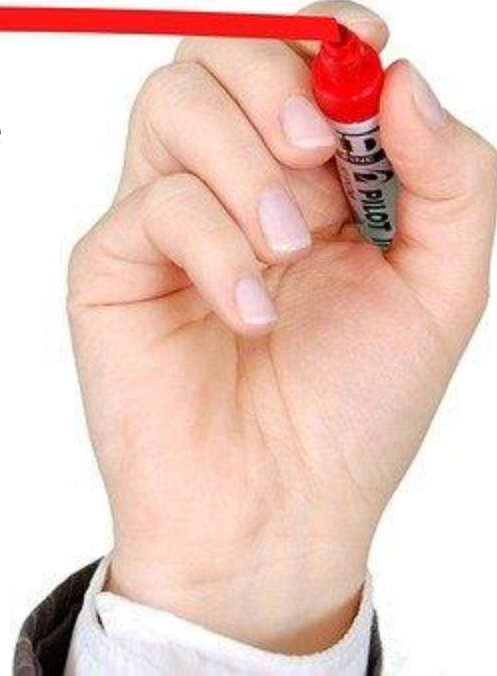
- Our regression results show significant improvement on our metrics.
- Model 1 concluded that sqft living is the most correlated factor when it comes to price.
- Model 2 performed better than Model 1.

- **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