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# House Price Analysis in King County, Washington

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# Outline

- Business Understanding
- Data
- Modeling
- Regression Results
- Recommendations
- Next Steps



# Congratulations! You're grandparents!



# Business Understanding

1. Budget: **\$250000**
2. Floors: **1**
3. Square Feet of House: **2000 SF**
4. Square Feet of Lot: **6000 SF**
5. Bedrooms: **3**
6. Bath: **2**
7. Basement?: **No**
8. Condition (0-4): **Good (3)**
9. Grade (0-7): **Good (4)**
10. View Quality (0-4): **None (0)**
11. Preferred Month of Purchase: **March**
12. Waterfront?: **No**
13. Renovated?: **No**
14. Year Built: **No year in particular**
15. Square Feet of Neighbors' Houses: **No specific square footage**
16. Square Feet of Neighbors' Houses Lots: **No specific square footage**



# Data

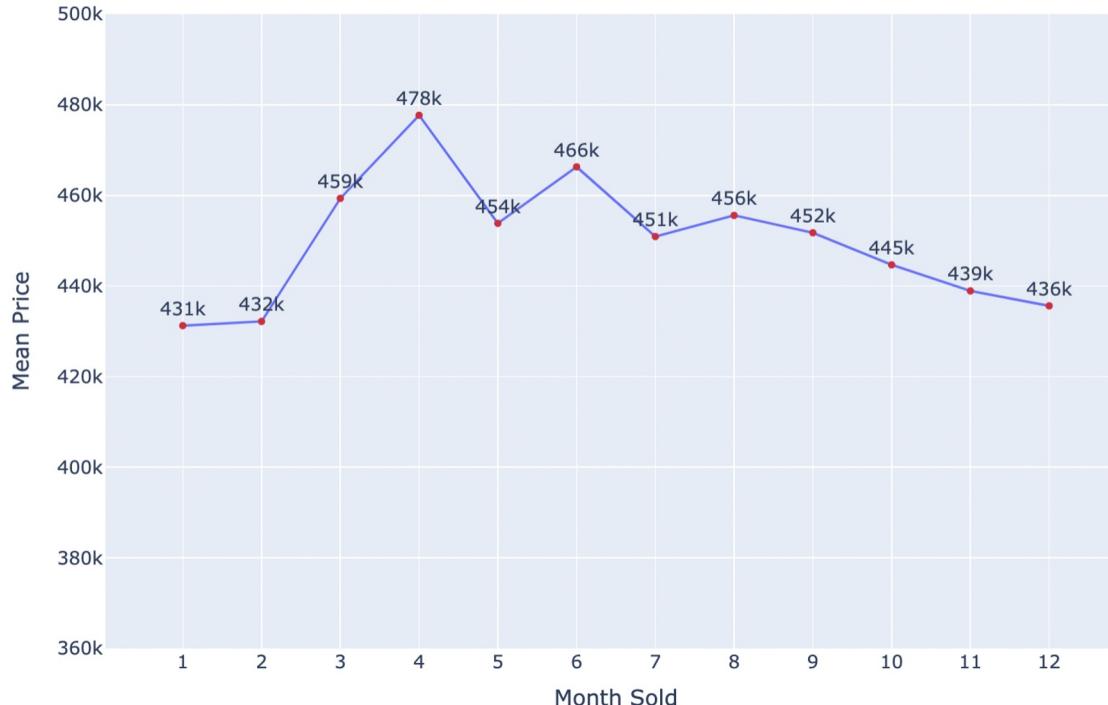
King County, Washington house sales from 2014 to 2015 (Source: Kaggle)

Includes data such as square footage, number of bedrooms, number of bathrooms, zip code, number of floors, condition of the house, and quality of view.

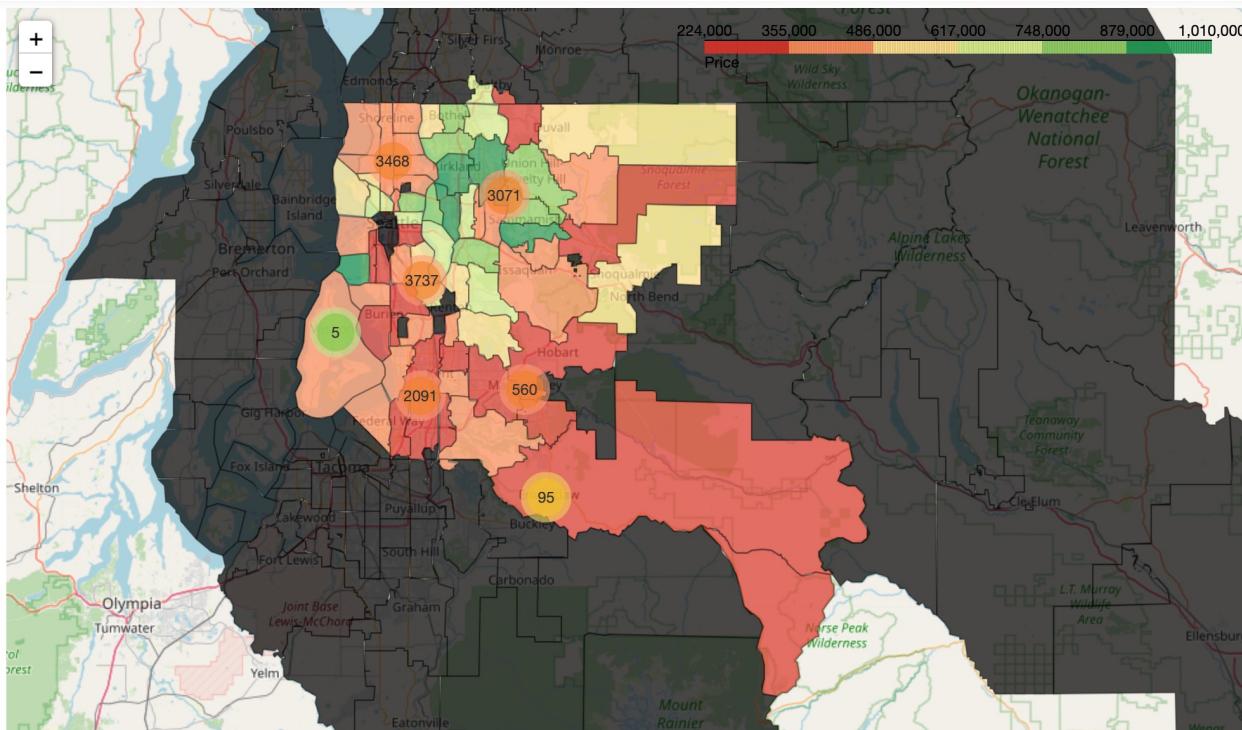


# Average Price Per Month

Mean Selling Price Per Month in 2014-2015



# Interactive Map of Zip Codes and Prices



\*Viewable in the Project 2 Jupyter notebook on my Github

# Modeling

- Linear regression
- Process:
  - Made categorical columns more interpretable (ex: date, zip code, condition)
  - Check for predictors with the strongest and weakest impacts on price
  - Looked at relationships between predictors
  - Consistently checked my error

# Regression Results

- Captures 85.51% of the spread of the data
- Error: \$52423
- Factors that have a large impact on price: Waterfront and Coordinates



# Recommendations

**Zip code 98002:** \$181,858

**Zip code 98032:** \$182,296

**Zip code 98168:** \$195,324

In the case that you save money,  
what can you buy?



# Next Steps

Parks?

Restaurants?

Hospitals?

Synagogues?

Churches?

Mosques?

Crime rates?



# Thank you!

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