

A wide-angle photograph of the Seattle skyline at dusk or dawn. The Space Needle is prominent on the left, and Mount Rainier is visible in the background. The city is filled with various skyscrapers and buildings. The image has a dark, moody tone with a blue and grey color palette.

Finding Your First Home



In King County, Washington

Summary

An analysis of house sale prices in King County, WA using regression modeling and descriptive analysis.

- Look at possible predictors of house sale prices in the region
- Specifically looking at houses that for first-time home buyers

Outline

- Business Problem
- Data
- Methods
- Results
- Conclusions

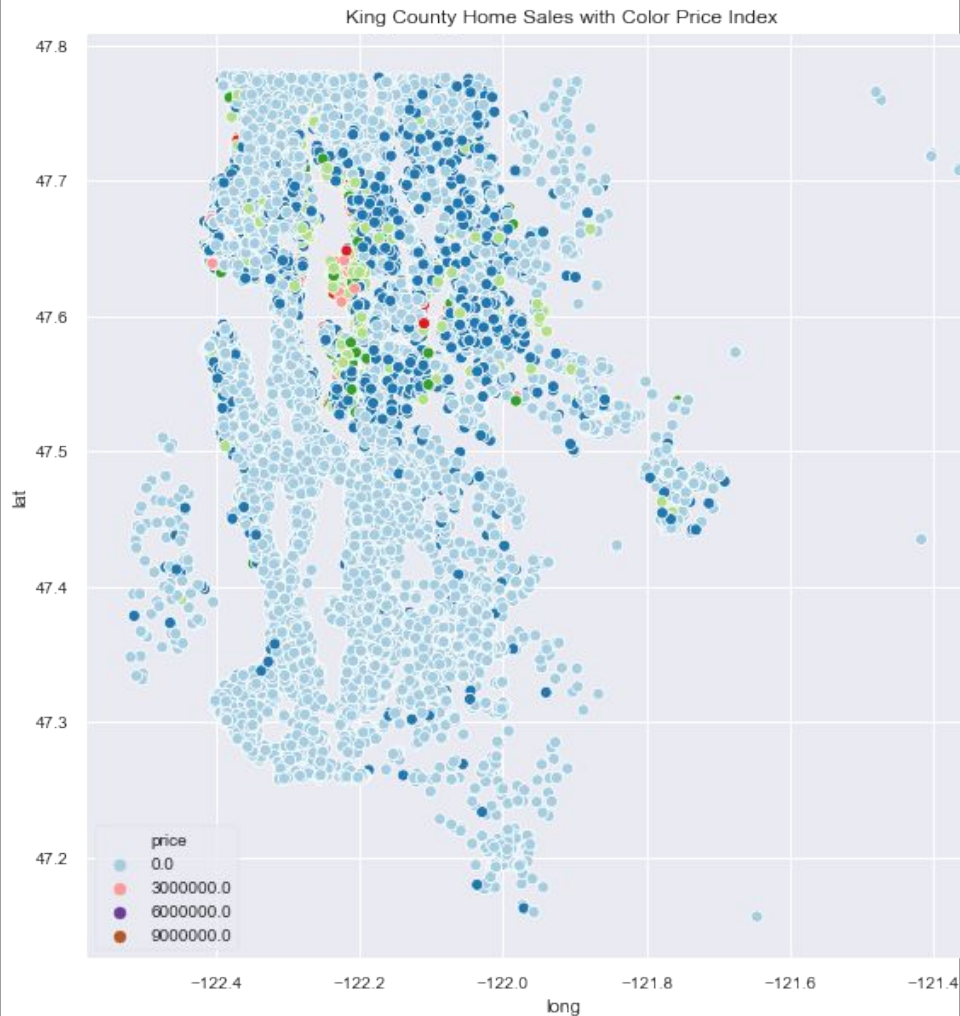
Business Problem

First-time home buyers looking for

- Affordability
- Livability
- Move-in Ready

Data

- King County, WA House Sales from May 2014 to May 2015 tracking over 21,000 homes
- Data points include date of sale, latitude and longitude of property, and building condition



Methods

OSEMN

Obtain | Scrub | Explore | Model | Interpret

Process for data preparation, exploratory analysis of data, and regression modeling

Libraries used: NumPy, Pandas, Pandas-Profiling, SciPy, Seaborn, Matplotlib, Folium, Cufflinks, Datetime, Sweetviz, StatsModel

Results

- Range of house sale prices from \$82,000 to \$7.7 million
- Biggest factors that contribute to sale prices:
 - size of living space
 - quality of construction (design & materials)

Conclusions

For first-time home buyers looking in King County, WA:

1. Median sale price was \$455,000, with middle 50% of all sales between \$325k - \$650k
2. Livable, move-in ready homes:
 - Building Condition above 3 = no structural repairs needed
 - Grade 6 or above = meets building codes
3. Size of actual living areas has a greater impact on sale price than overall lot size

Conclusions

Top 10 Towns & Cities with Lowest Median Sales Prices

- Federal Way - \$268,750
- Auburn - \$272,000
- Enumclaw - \$280,017
- Kent - \$284,500
- Maple Valley - \$342,250
- Renton - \$361,000
- Black Diamond - \$372,000
- Duvall - \$404,625
- North Bend - \$421,000
- Carnation - \$425,000

Future Work

- Time of sale
- Geographical location, maybe by neighborhood
- Interactions



Thank You!

Email: jtang1.618@gmail.com

GitHub: [@jtang1618](https://github.com/jtang1618)

LinkedIn: [linkedin.com/in/josephjtang/](https://www.linkedin.com/in/josephjtang/)