



KING COUNTY HOME SALES

Regression Analysis
By Aaron Lee



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OUR GOALS

1. Inform you, the real estate investor, about characteristics that influence home values of homes in King County, WA.
2. Find what locations and time of year yield the highest prices.
3. Show inferences made from our Linear Regression model
4. Provide recommendations to help you find value in King County homes and maximize your profits



OUR HOMES

2015 KING COUNTY HOUSING DATA

21,600

Homes Sold

\$540, 000

Average Sale Price

Selection Criteria (19,000 homes)

\$120k to \$2M

Sale Price (USD)

2/1 to 5/5

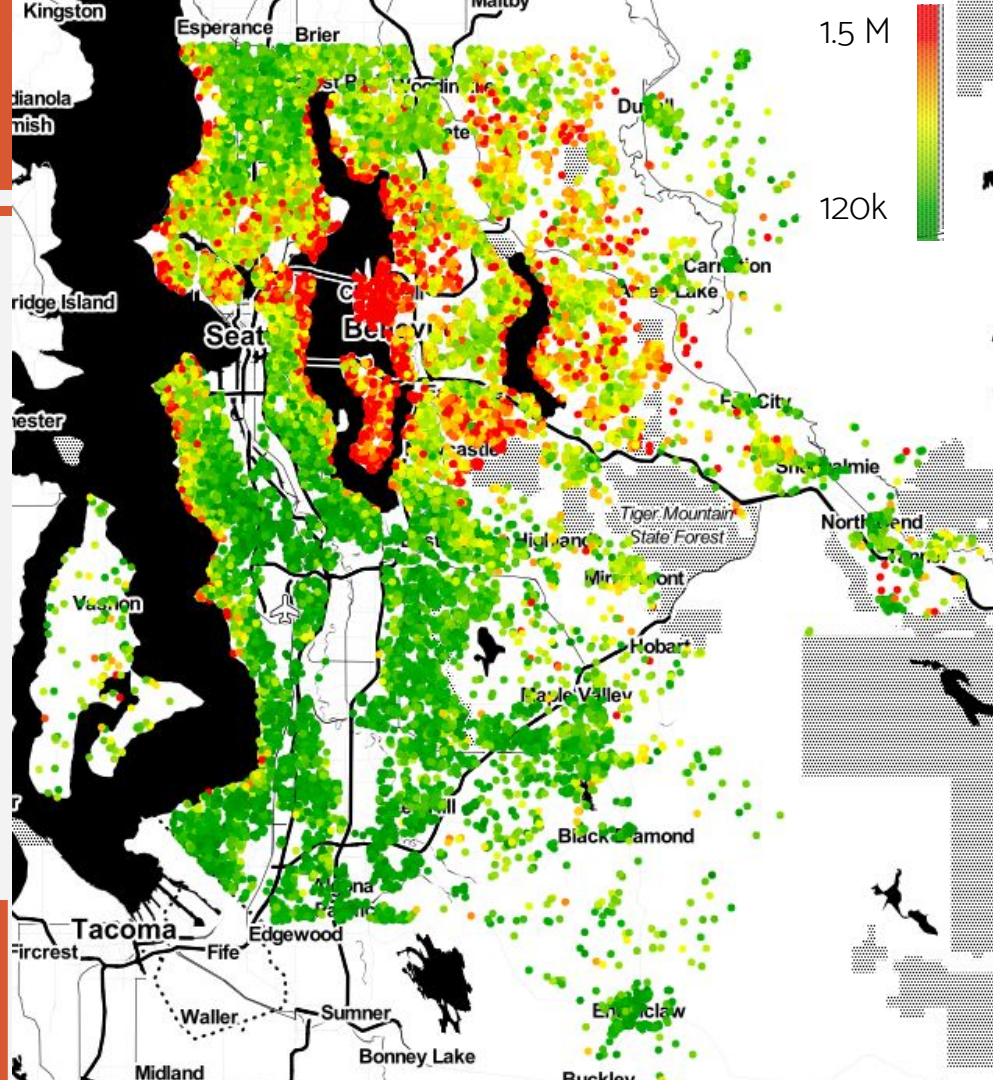
Bed/Bath

1000 to 5500

Living Space (sqft)

Average to Very Good

Condition



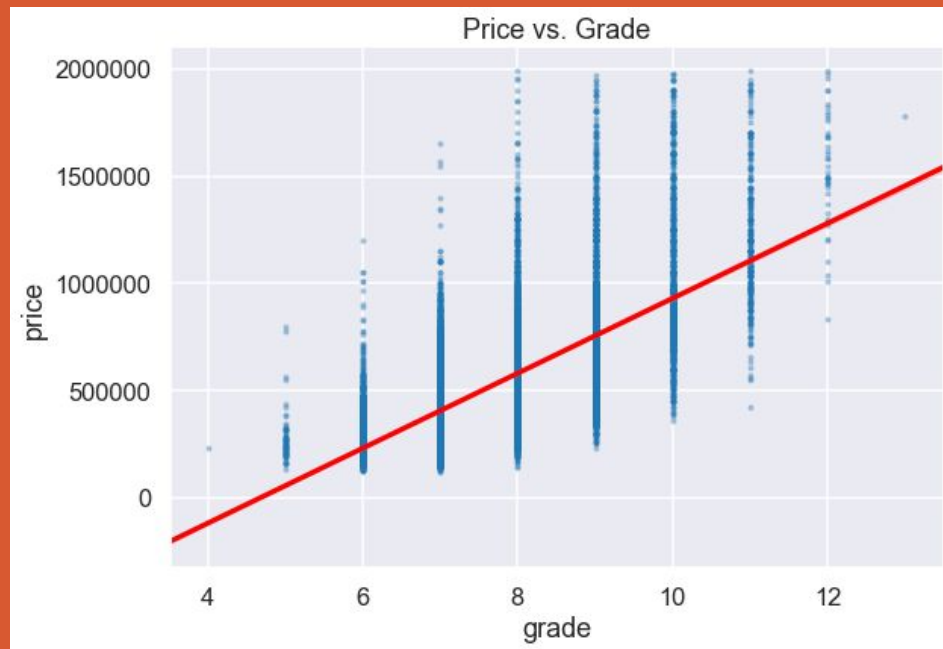
FACTORS INFLUENCING SALE PRICE

TOP FACTORS (in order of affect)

1. Grade (assessed quality)
2. Living Space (sqft)
3. Number of Bathrooms
4. School District and Score (niche.com)
5. View (ranked 0 to 4)
6. Number of Bedrooms

OTHER FACTORS OF INFLUENCE

- Timing of sale (month)
- Proximity to waterfront, downtown, views
- Year built or renovated
- Does it have a basement



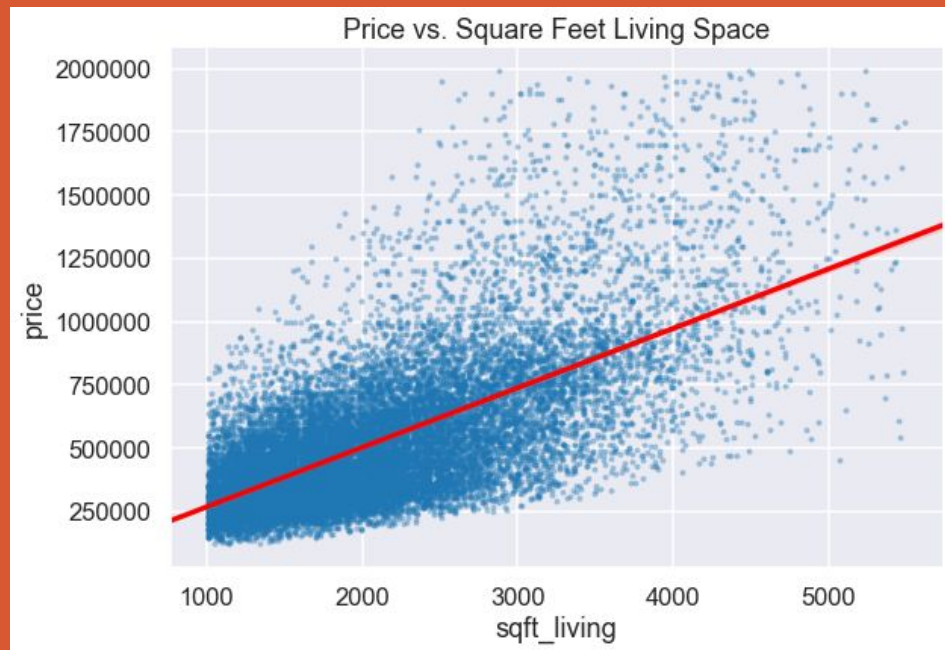
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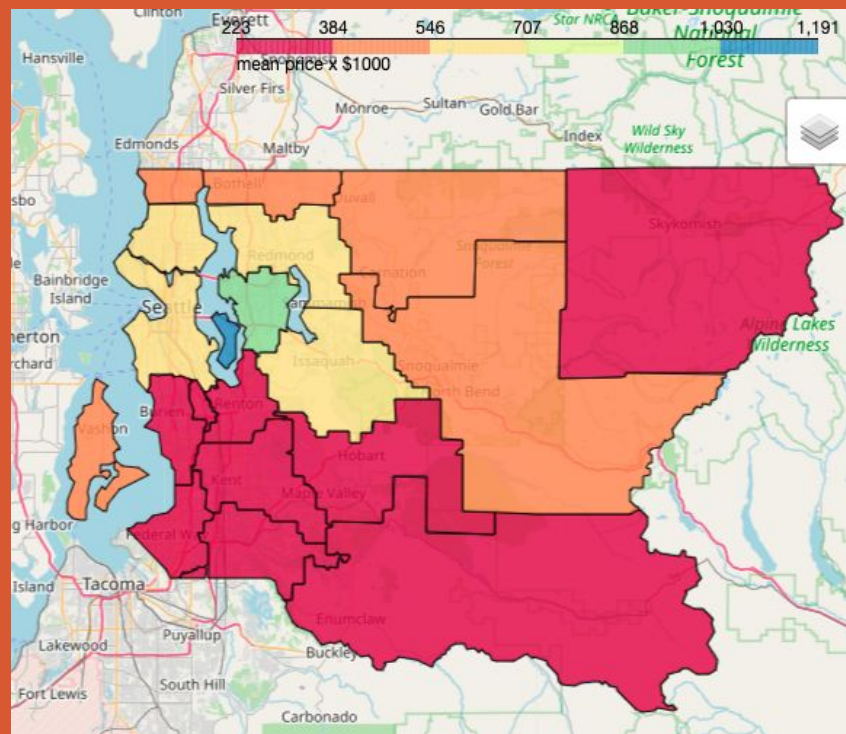
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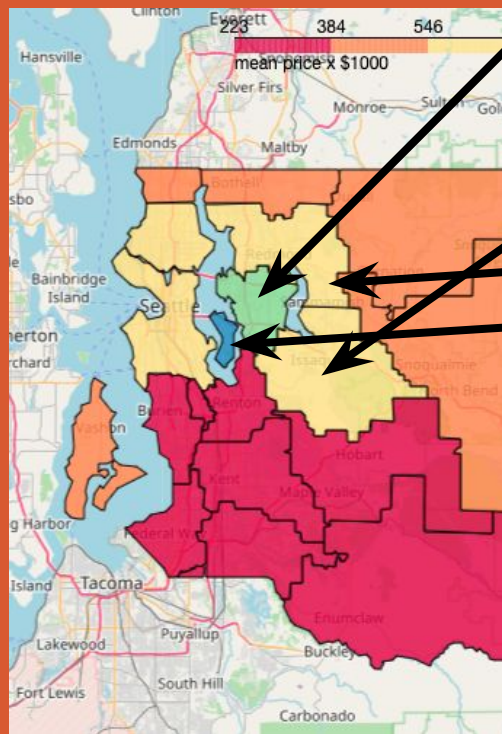
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| school_district | price |
|-------------------|--------|
| Auburn | 291.0 |
| Bellevue | 930.0 |
| Enumclaw | 320.0 |
| Federal Way | 290.0 |
| Fife | 291.0 |
| Highline | 322.0 |
| Issaquah | 690.0 |
| Kent | 317.0 |
| Lake Washington | 666.0 |
| Mercer Island | 1191.0 |
| Northshore | 526.0 |
| Renton | 373.0 |
| Riverview | 479.0 |
| Seattle | 591.0 |
| Shoreline | 444.0 |
| Skykomish | 223.0 |
| Snoqualmie Valley | 532.0 |
| Tahoma | 382.0 |
| Tukwila | 256.0 |
| Vashon Island | 487.0 |

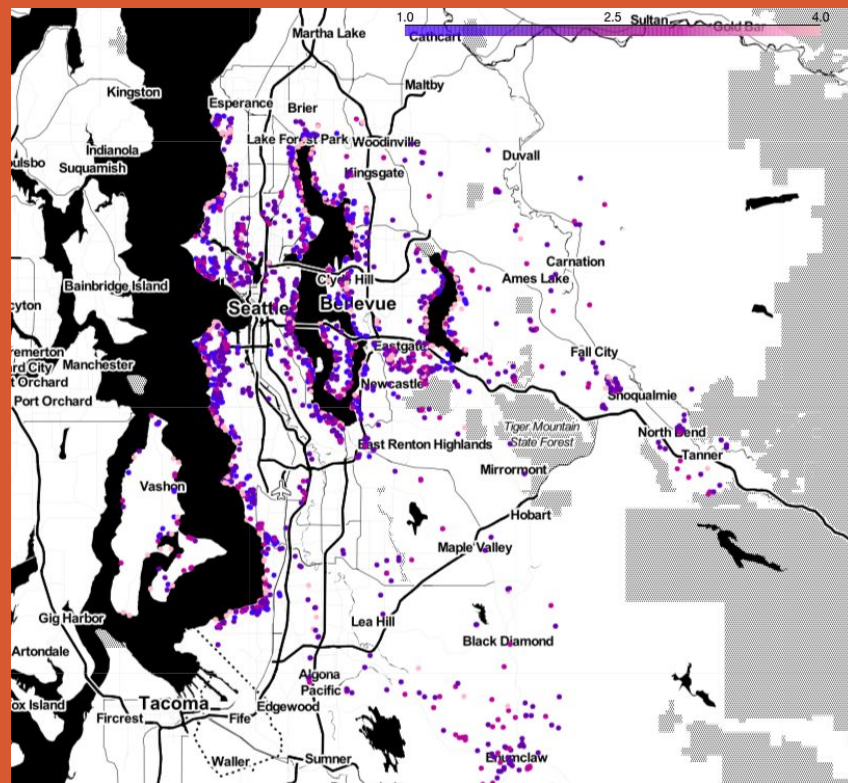
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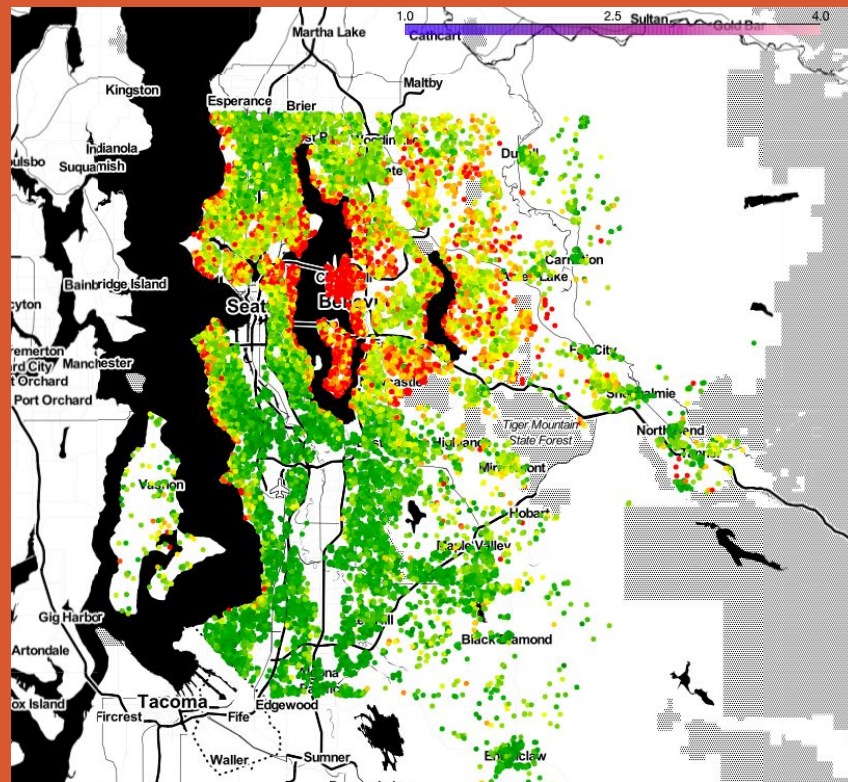
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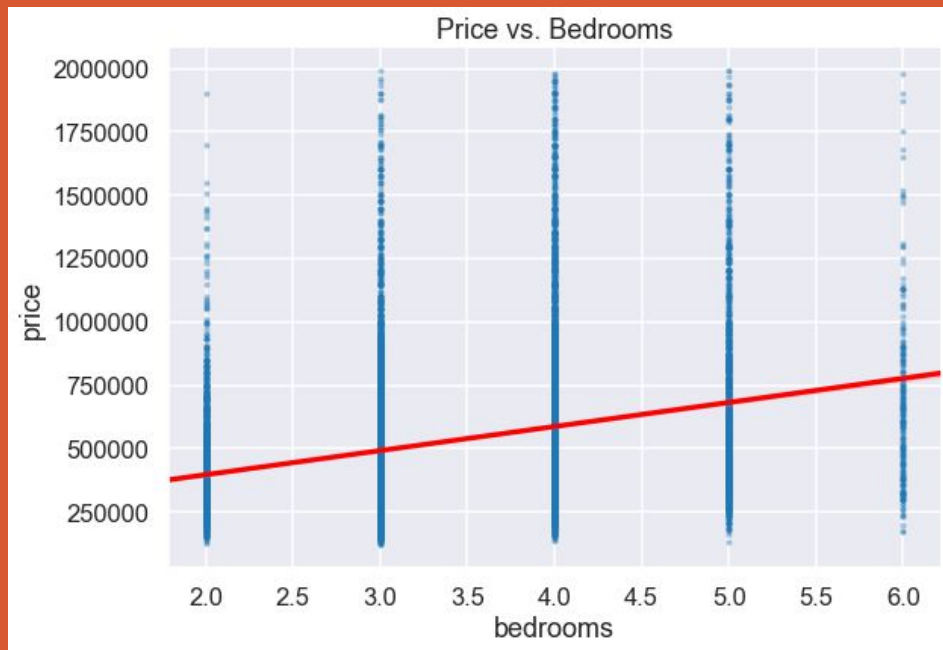
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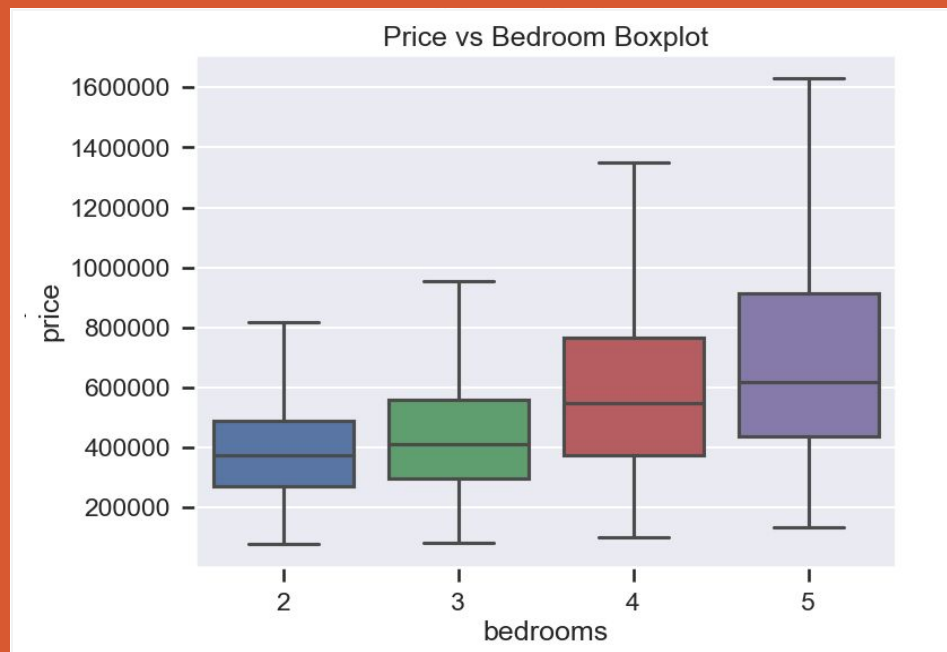
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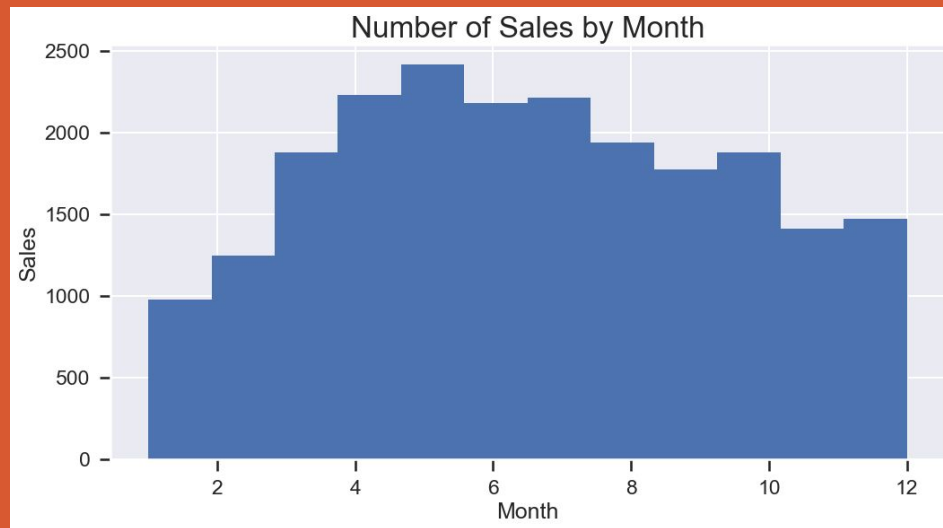
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OUR LINEAR REGRESSION MODEL

CHARACTERISTICS SELECTED

Grade

Square Feet (instead of bed/bath)

View (10% of properties)

School District Score

Distance From City Center

MODEL PERFORMANCE

Model accounts for 70% of home price

All variables are statistically significant (0.05)

Validated model

WHAT CAN WE INFER FROM OUR MODEL?

GRADE: If a home assessment increases by 1, the model predicts the home price increases by \$76,000

SQUARE FEET: Each increase in sqft increases the value of the home by \$140.

VIEW: View of 1 or 2 adds \$80k to \$90k
View of 3 adds \$157k
View of 4 adds \$344k

SCHOOL DISTRICT SCORE (niche.com): Each increase in score (i.e. B+ to A-) yields a \$38k increase

DISTANCE: ~\$10k per mile from downtown decrease in price

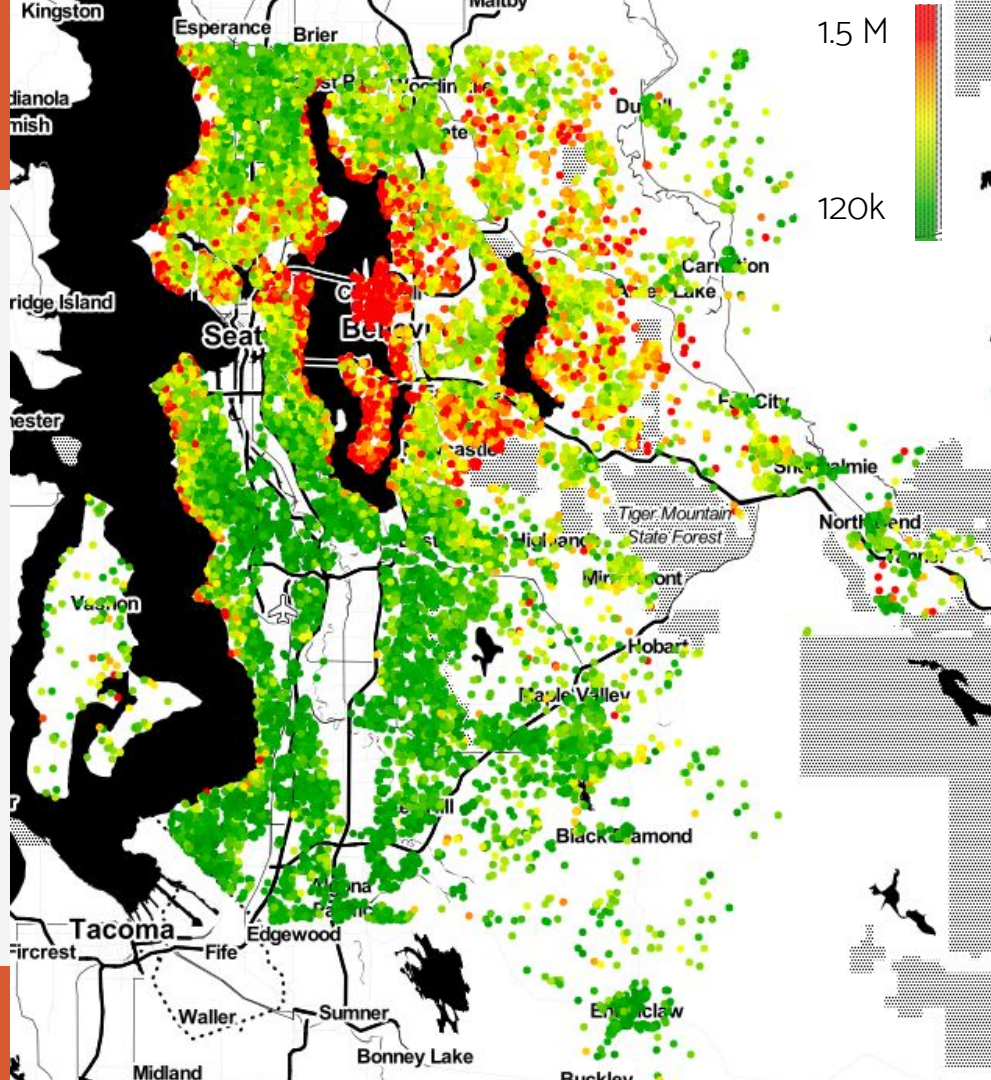
RECOMMENDATIONS

SELLING A HOME (Improve it)

- Can you increase the assessed grade?
- Can you add sqft, beds, or baths?
- Does it make sense to improve in your area
- Sell in the summer. List in April / May

BUYING A HOME (Leverage value)

- Look for homes with upgrade potential in areas with exceptional schools, great views, and accessibility to downtown.
- Markets in desirable areas can likely absorb price increases and maximize profit
- Avoid expensive improvements in areas that do not have the identified characteristics
- Be flexible when you buy. Avoid peak.





THANK YOU!

Any questions?

Aaron Lee
Data Science - Flatiron School

