
CASSIE NUTTER - JAN. 2021



House Price Predictions

Using Linear Regression

Business Problem

King County, WA has 46 of the top 50 most expensive zip codes in Washington and includes Medina (98039) – Washington's most expensive zip code

First time home buyers make up 33% of all home buyers

A local real estate company would like to know which features have the highest impact on price and use this information to help their first time home buying clients





DATA

House sales in King County, Washington.

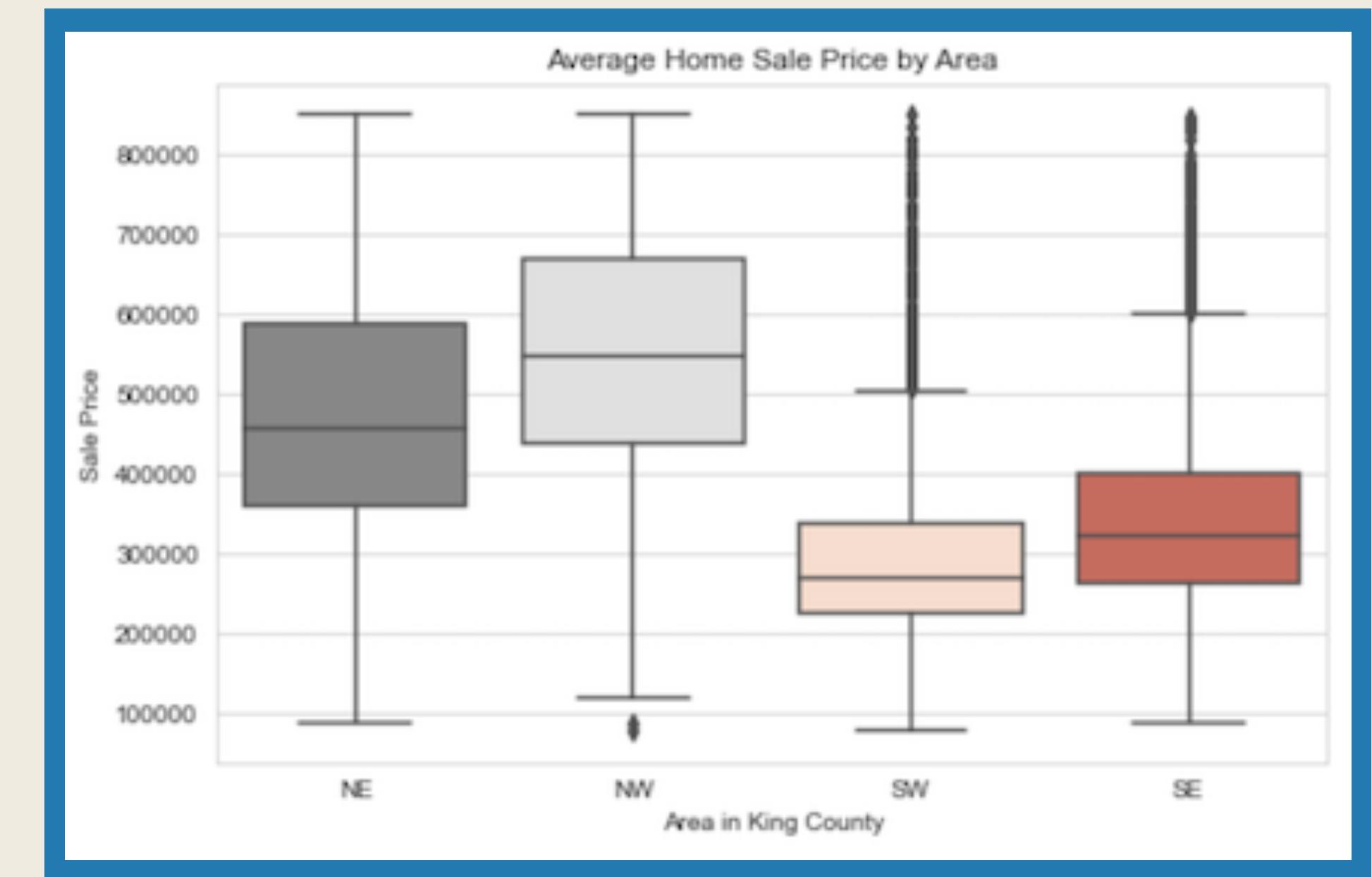
Over 21,500 properties sold from May 2014 - May 2015
Prices from \$78,000 to \$7.7 million

Examples of features include: bedrooms, bathrooms, living space, sale price, waterfront, year built, zip code, condition

Interesting Finds in King Co. Data

October - March are the least expensive months to buy

Homes in the southern region of the county are less expensive



More Interesting Finds



65% of selected data has a condition ranked as "3"

A waterfront property costs about \$143,636 more

Having your house advertised or "viewed" can increase the sale price
\$116,000 - \$201,000

Predicting House Prices



Important Features

Living Space

- Larger homes cost more
- For every square foot of living space added, the sale price increases \$123

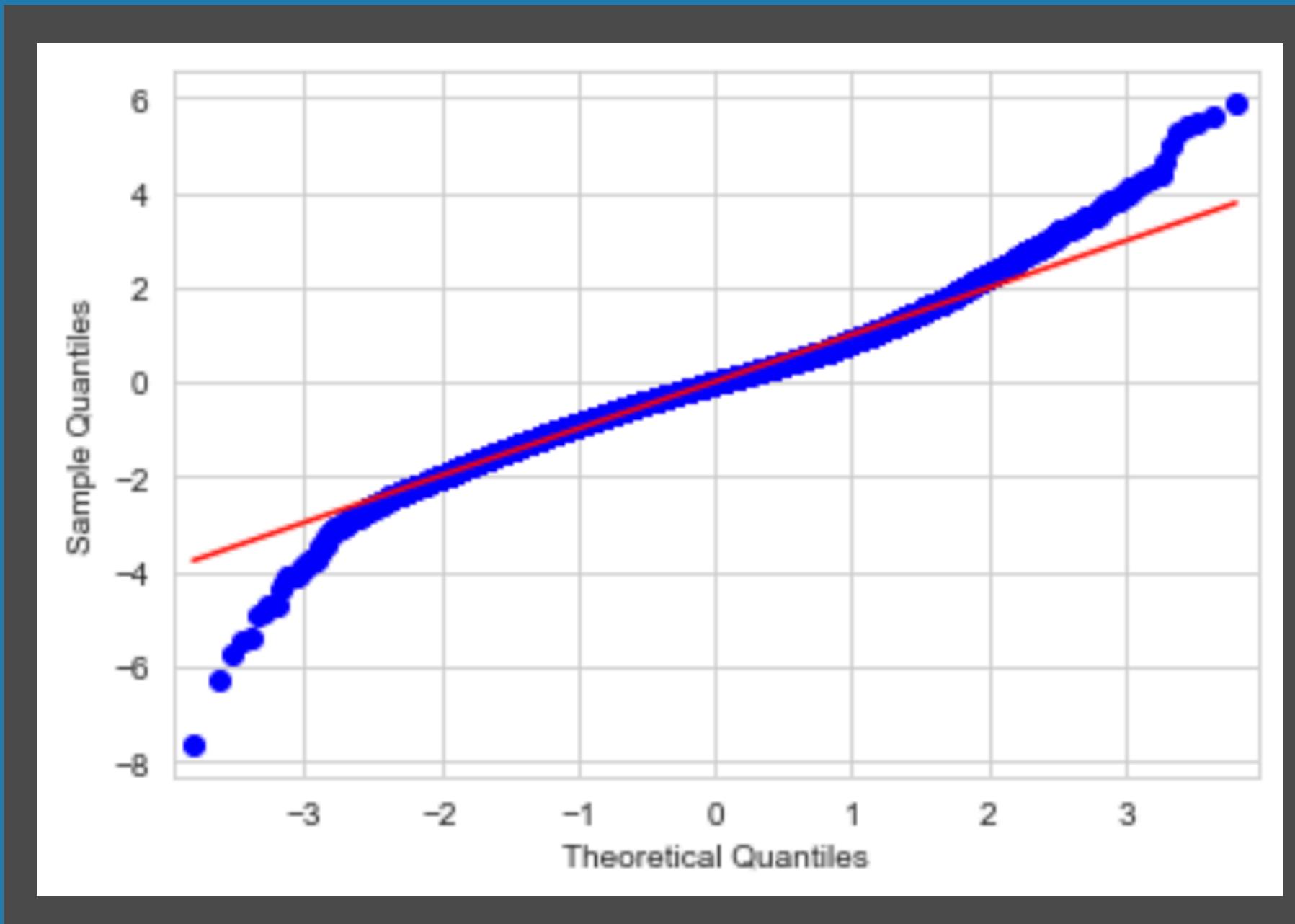
Lot Size

- Larger lots cost more
- For every square foot of land or lot space added, the sale price increases \$0.44
- Most lots are around 7463 ft²
 - This would add about \$2985 to the sale price

Year Built

- For every year a home gets older, one can expect the average property value to decrease by approximately \$75

Results



Features

Uses zip codes to improve model's predictability

Precision

80%

Error

\$76,884

The best model was able to explain 80% of the variation in the average sale price within \$76, 884.



FIRST TIME HOME BUYER

Summary and Recommendations

- Location - southern region is least expensive
- Size - smaller houses and lots are more affordable
- Age - older homes cost less, but the decrease happens slowly

Future Work

Commute times

Vicinity to public transportation or walk-ability

Estimating other costs like home insurance and taxes

Surrounding amenities: schools, parks, restaurants, grocery stores, hospitals and other places of interest





Thank you.

cassie.m.nutter@gmail.com