

King County

A Modeling Analysis of Washington
Real Estate

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Business Problem



Who: Genesis Capital 'Fix & Flip' Division



Where: King County, Washington



What: Price

Business Questions



How do features of a house affect the selling price?



The extent to which price is affected



Coefficient examination

Data Understanding

King County Sales, 2014 - 2015



21,597 Entries

21 Descriptors

Target: Price



Predictors of Note:

Bedrooms, Square Footage, Floors, Zip Code

First Simple Model



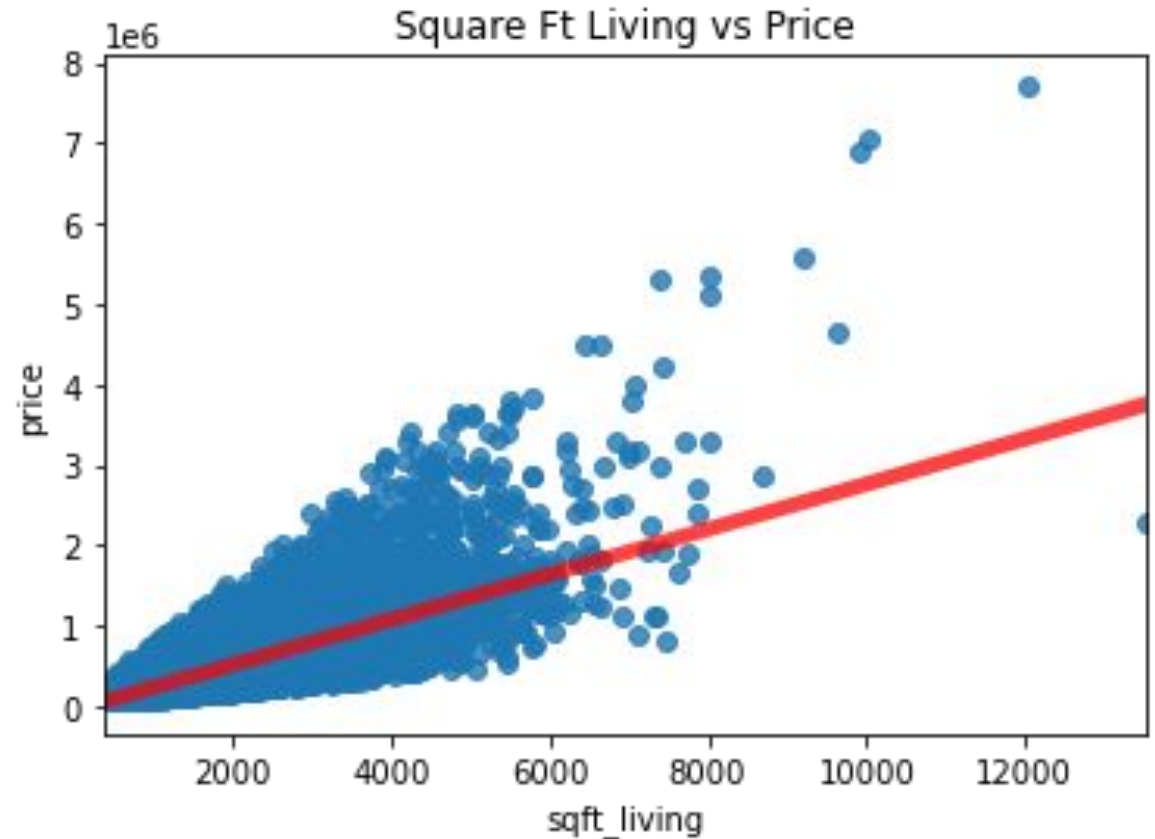
Sqft_living
Correlation: 0.701917



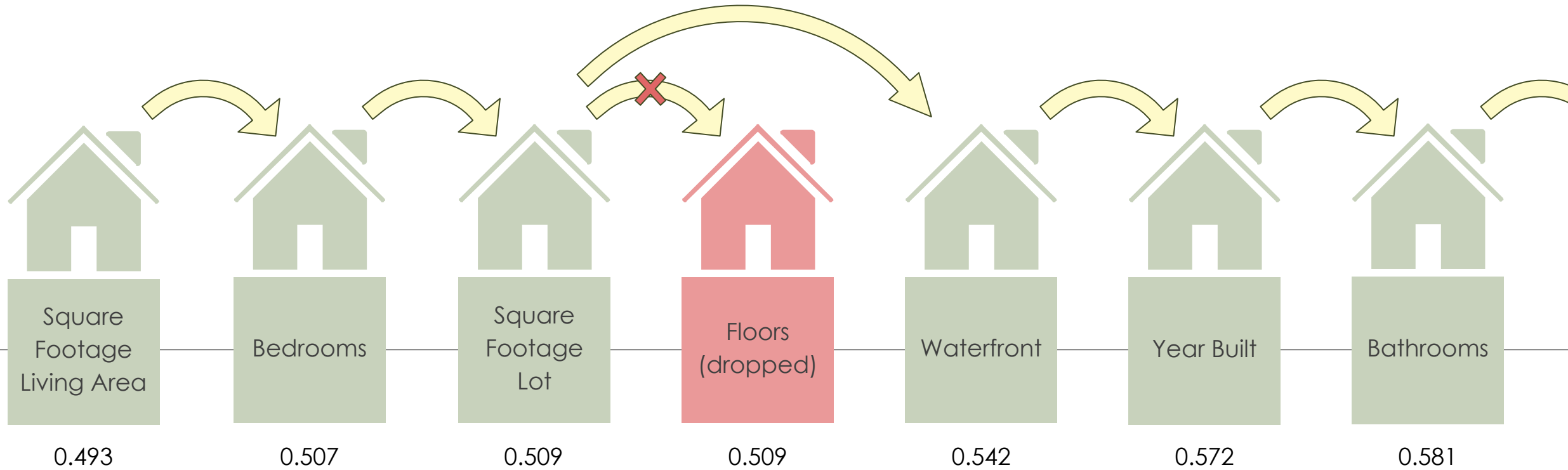
Model Results:
R-Squared: 49.3%



Coefficient: + \$280 per sqft



Iterative Modeling Process



p-value = 0.741

R-Squared
Values

Final Model

After turning 70 zip codes into categorical variables and using them to get a final model, we get this:

R-Squared: 0.779



Positive Coefficients	
Square Foot Living Space	+ \$256.93
Square Foot Lot	+ \$0.25
Bathrooms	+ \$26,370
Waterfront View	+ \$868,300



Negative Coefficients	
Number of Bedrooms	- \$3,800
Year the House was Built	- \$452



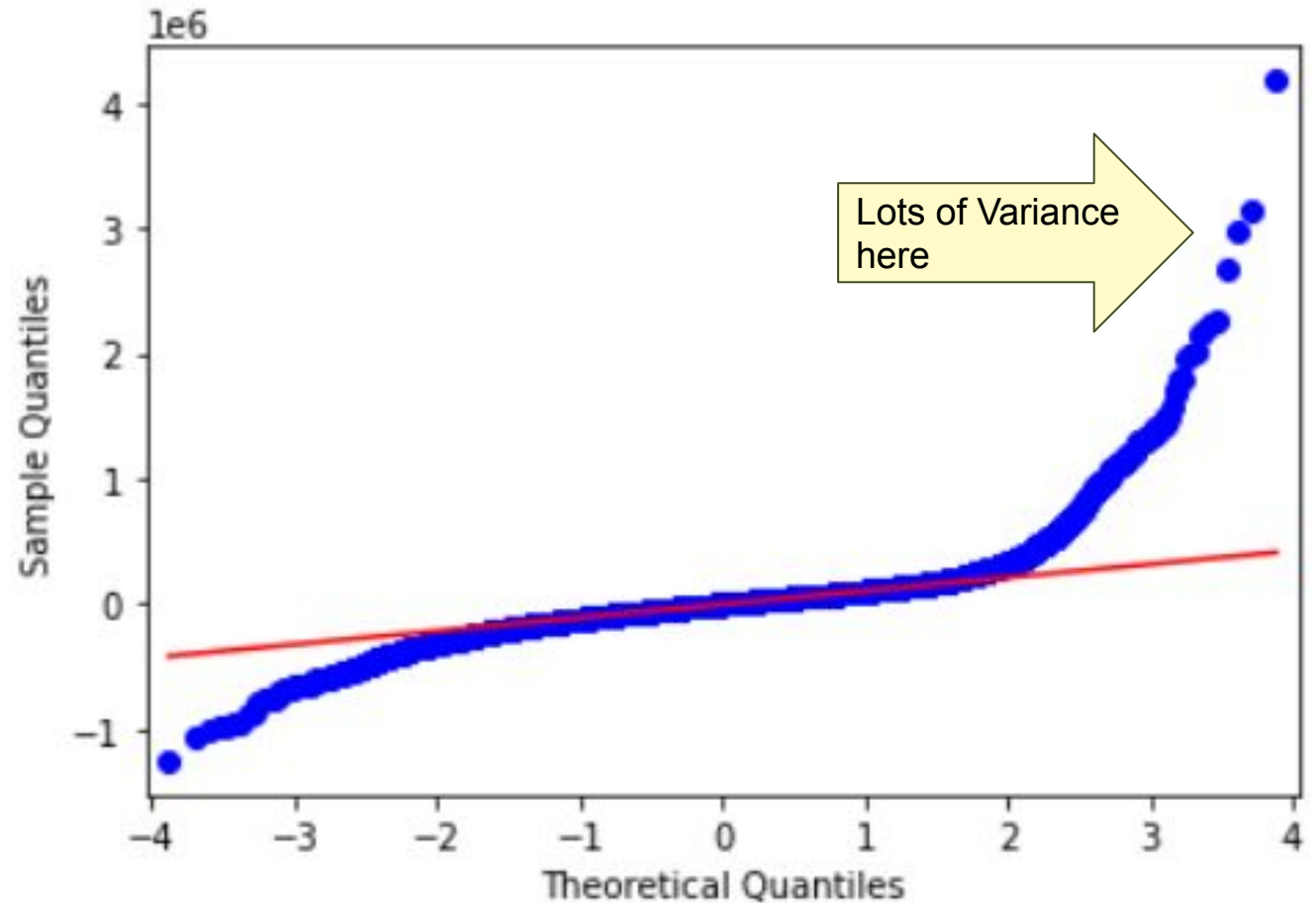
Zipcodes

Taking It Further with Log Transforms

Final Model Before Log
Transforming 'price':



R-Squared: 0.779

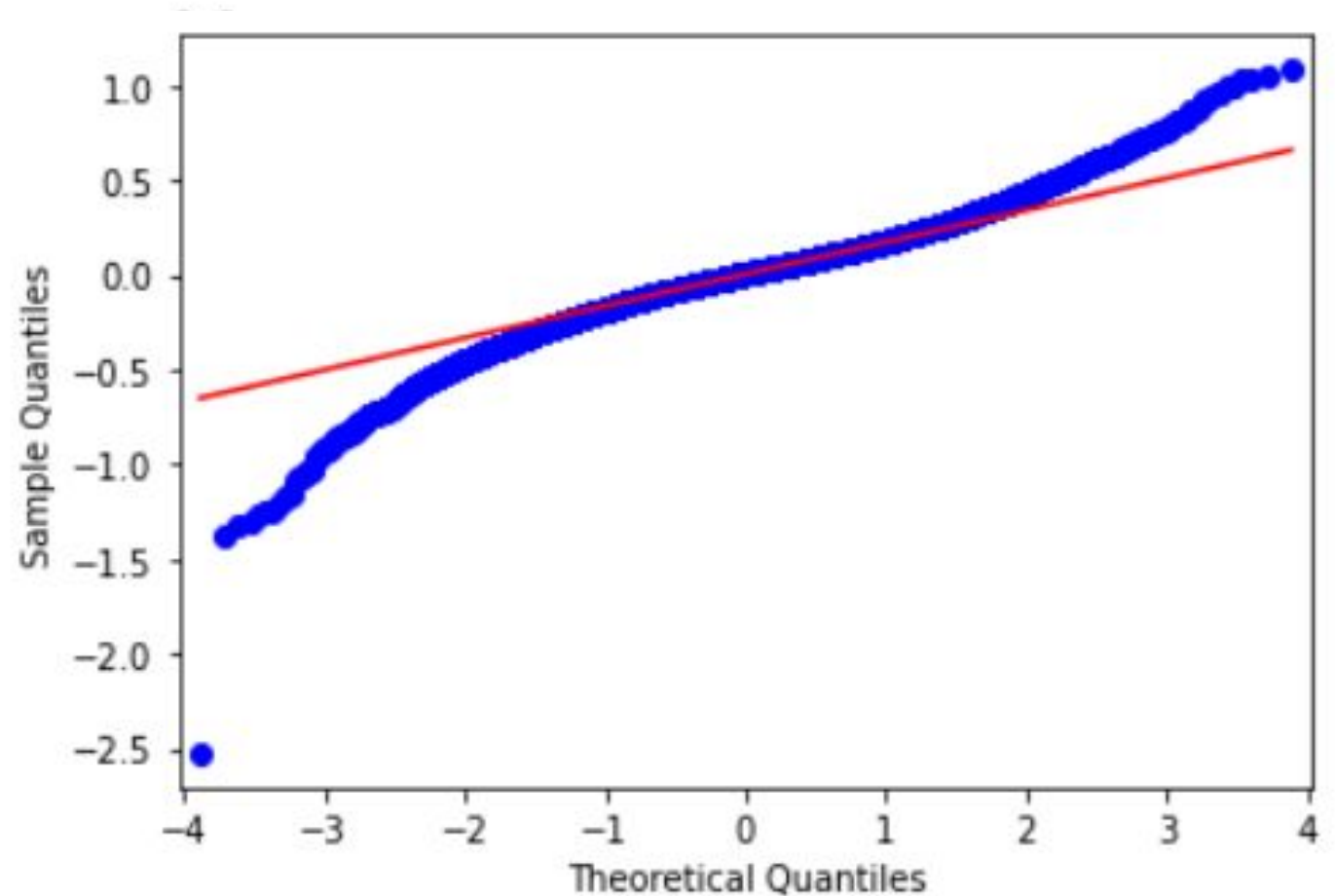


Taking It Further with Log Transforms

Final Model After Log
Transforming 'price':



R-Squared: 0.840



Interpreting Log Transform Coefficients



Positive Coefficients	
Square Foot Living Space	+ 0.03%
Bathrooms	+ 4.78%
Square Foot Lot	+ 0% (tiny number)
Waterfront View	+ 97.13%



Negative Coefficients	
Number of Bedrooms	- 1.633%
Year the House was Built	- 0.03%

Next Steps



Hone in on renovation specific predictors



Dataset with detailed renovation information



Goal: Finding value in renovation types

THANK YOU!

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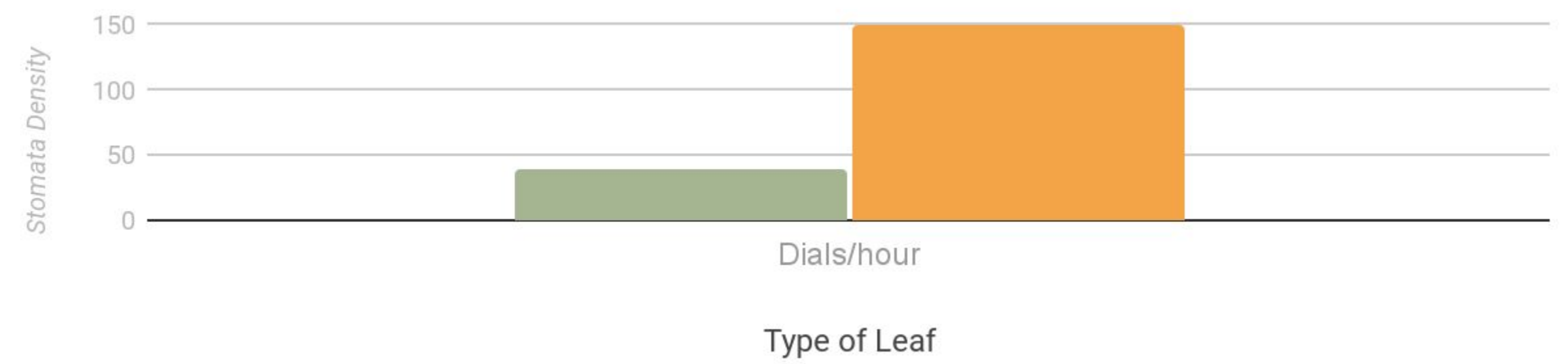
<https://github.com/WolfnChaos>

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Real Estate



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