

Home Insurance Premiums:

Determining Relevant Home Features

Regression Analysis on
King County, WA Homes



Martin Reyes

Home Insurance Premiums

Goal

Determine the validity of insurance premiums

Question

Which home features matter?

Results

Models and statistics that analyze feature-price relationships



Model and Analysis Process



01 Obtain



Source King County
House Data from May
2014 to May 2015

02 Scrub



Clean the data

03 Explore



Analyze statistics of the
house features and price

04 Model



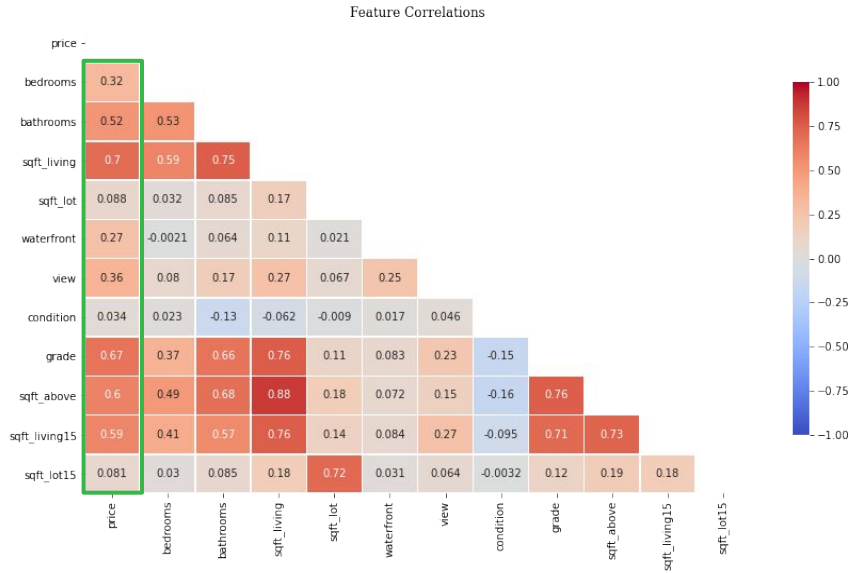
Analyze feature-price
relationships with linear
regression models

05 Interpret



Gather and organize
our findings

Results: Which Features Matter?



Relevant Features

- Sqft.
- KC grade
- Sqft of 15 nearest neighbors
- Bathrooms



Irrelevant Features

- Lot sqft.
- Condition (unknown source)
- Day/month sold



Results: Model Suggestions

Best Performing Model

71%

71% of the variation in price is explained by the features

Most Trusted Model

47%

Assumptions met

Takeaways

Strong relationship with price:

- Total Sqft
- KC grade
- 47.5° N



Takeaways

Some linear relationship with price:

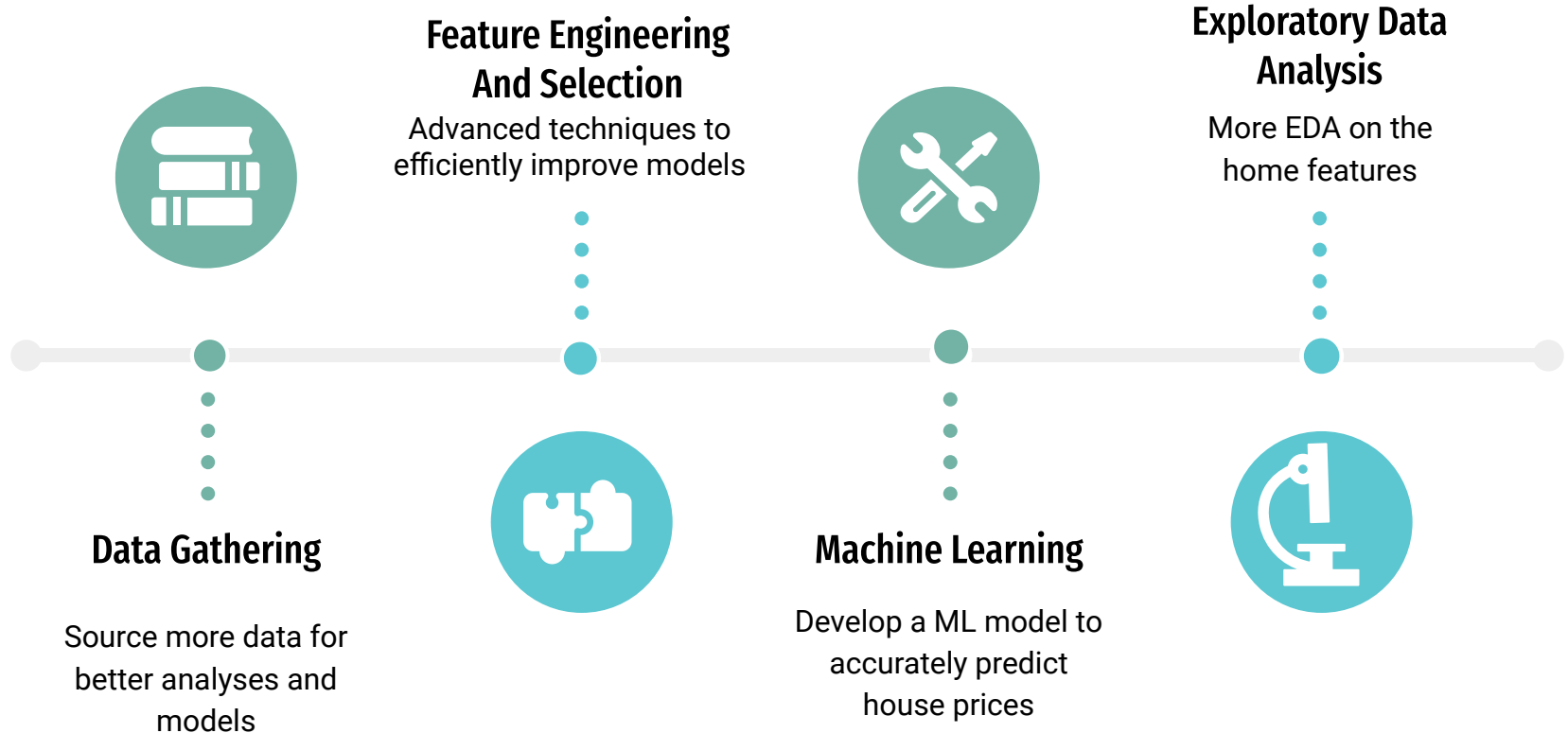
- Sqft of 15 nearest neighbors
- KC grade



Summary of Insights



Next Steps



Thank You

Email

martinreyes.eng@gmail.com



GitHub

github.com/MartinReyesDS



LinkedIn

www.linkedin.com/in/martin-reyes-ds

