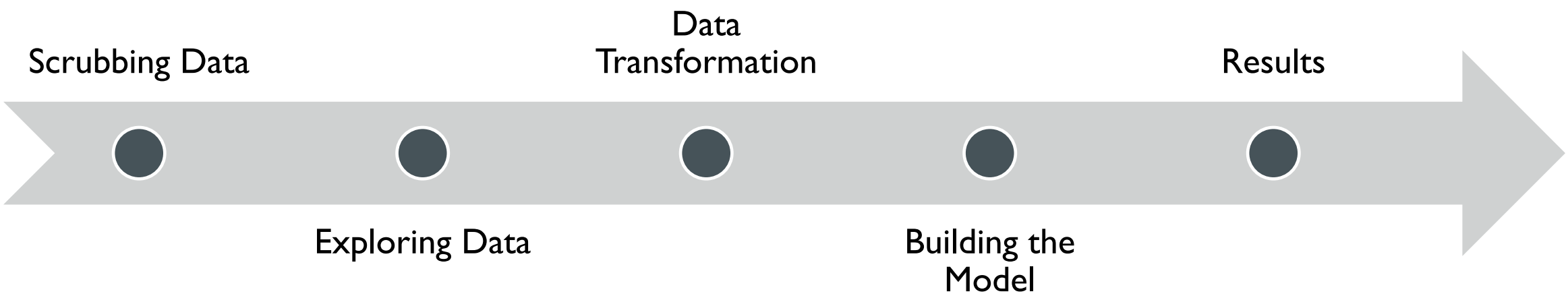
PROJECT 1 – PRESENTATION
KC HOUSE PRICES

RAYMOND WILLEY

METHODOLOGY



SCRUBBING DATA

Missing Data

Waterfront View

- Missing values replaced with most common result: No waterfront view

Times Viewed

- Very few items (less than 1%): omitted instances with missing data

Year Renovated

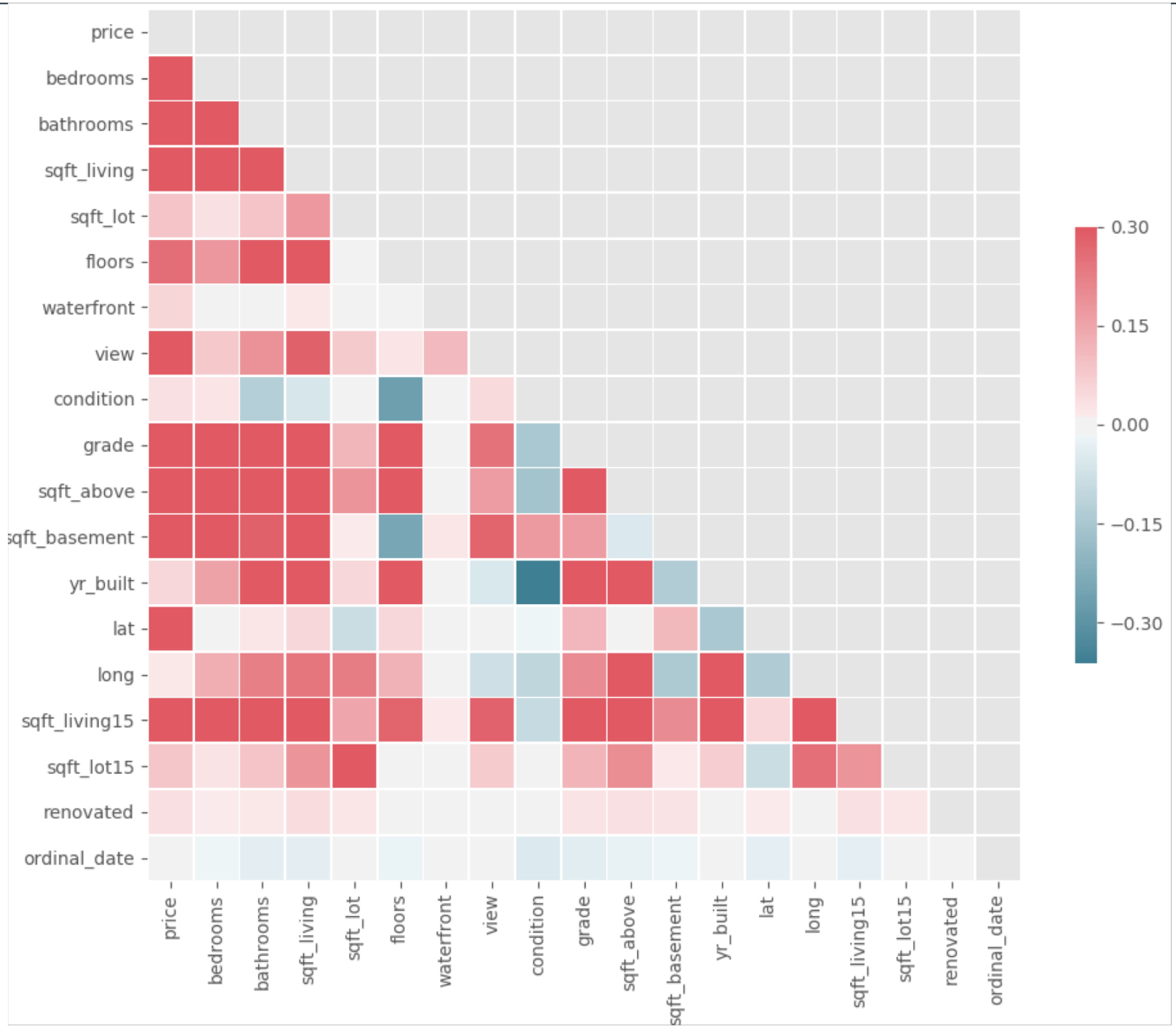
- Used change in square footage and year renovated to determine if ever renovated

Basement Square Footage

- Derived from difference between total square footage of living area and living area above basement

EXPLORING DATA

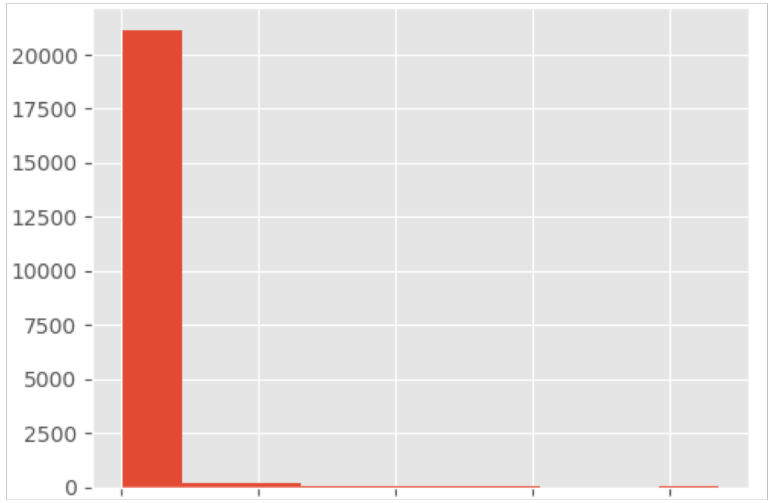
- Items in bright red or bright blue indicate strong correlation
- Items dropped:
  - Number of bathrooms, bedrooms, specific square footage calculations, etc. strongly correlated with total, current square footage
  - Year built, longitude, and grade not sufficient predictors (grade too ambiguous)

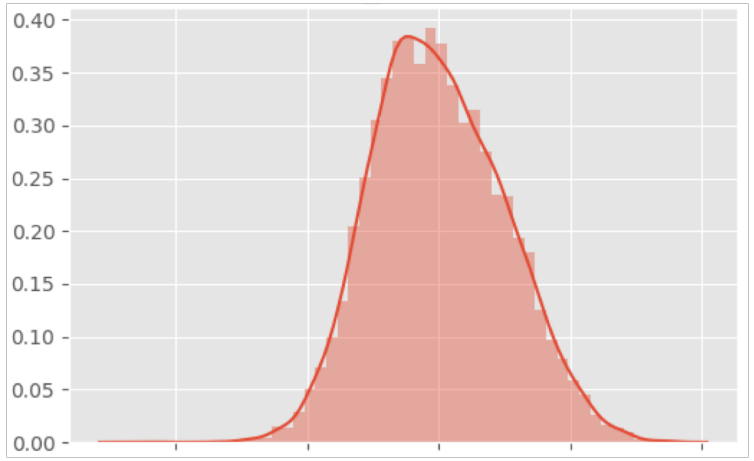


TRANSFORMING THE DATA

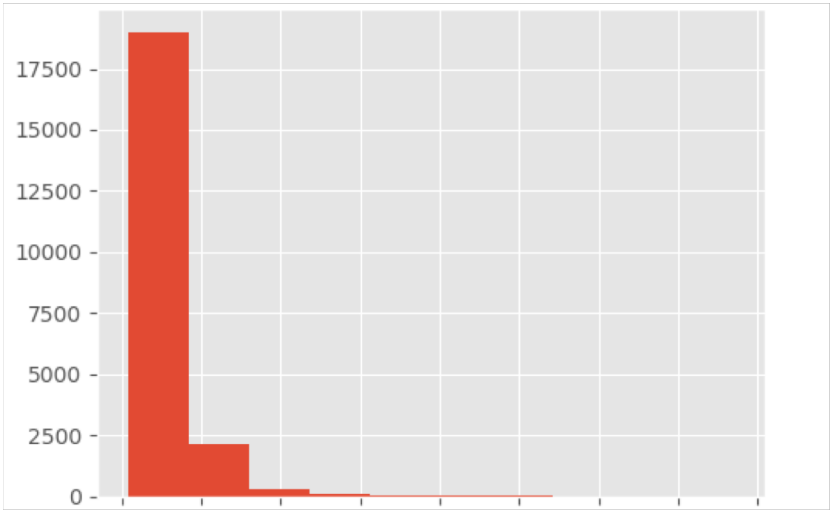
- Distribution of data suggests changes increase on a percentage basis rather than absolute basis
- Example: percentage increase in square footage results in a percentage increase in price

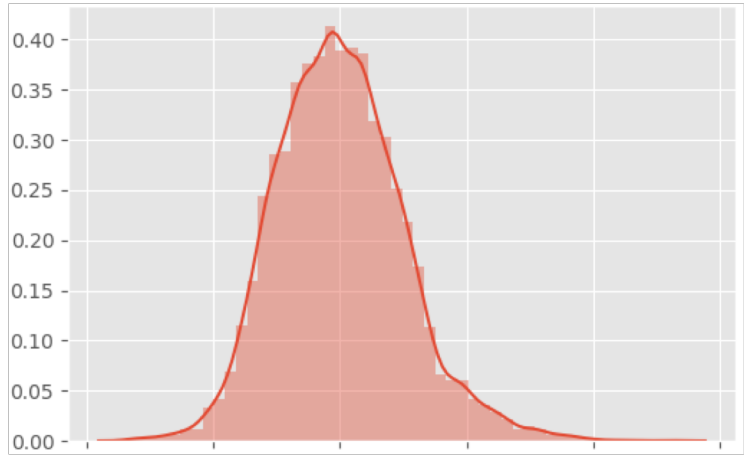
Square Footage (2015)





Price

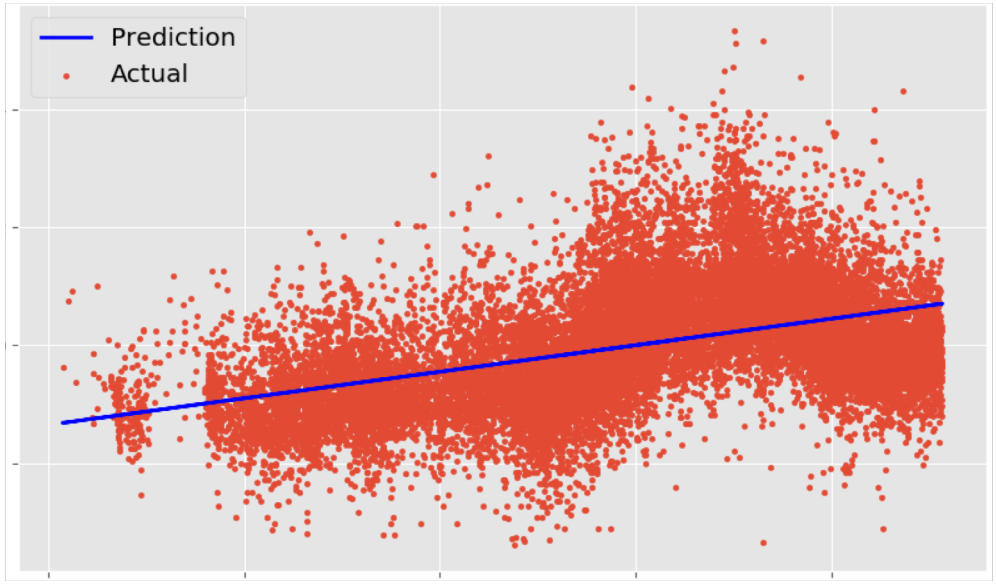




Upper figures show absolute distribution of Price & Square Footage; lower figures show percentage scaling

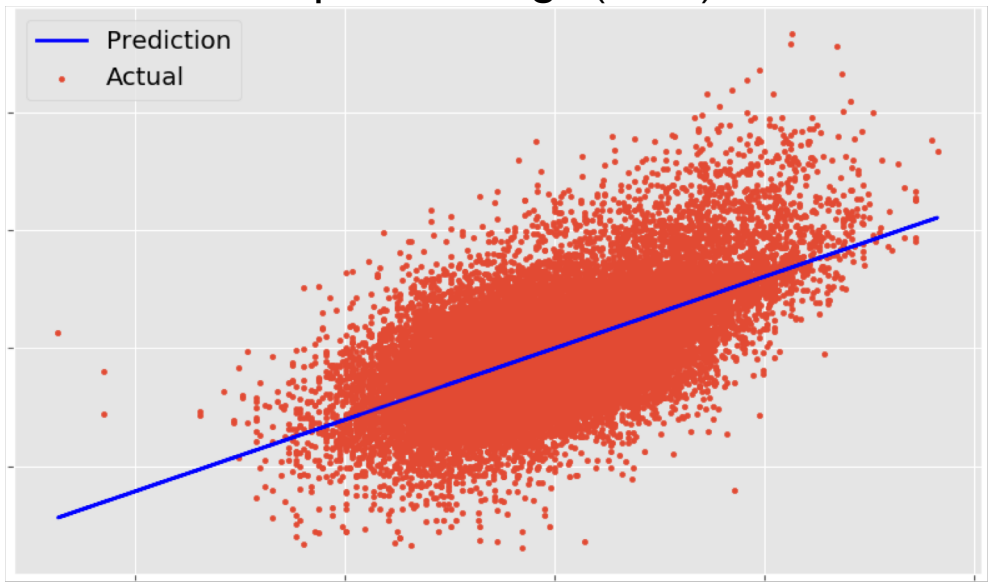
STRONGEST PREDICTORS OF PRICE

Latitude



Prices higher in the north

Square Footage (2015)



Larger size leads to higher price

RESULTS
PRIMARY DRIVERS OF PRICE

- For every percentage point increase in the following, price increases by the given percentage:
  - Square Footage (Living Area): 0.52%
  - Latitude: 0.09%
  - Square Footage (Lot): 0.11%
  - Zip Code
    - Can lower price by as much as 1.71%
    - Can raise price by as much as 0.98%
- Approximately 74% (+/- 3%) of the variance in price can be explained by these 4 variables.

QUESTIONS?