



# Factors contributing to house prices

# What data was used?



- Records of home sales in Ames, Iowa
- Includes some very specific house features like whether a house has an open porch
- Many subjective features such as the condition of the garage which are ranked on an ordinal scale

# Feature Selection



- There were way too many features that appeared to be related to other features
  - Examples include General Living Area, 1st Floor Square Footage and 2nd Floor Square Footage
- Feature trimming was done via Pearson's correlation coefficient to reduce multicollinearity
- Eventually, there were a few winners which had the highest correlation to sale price

# Feature Selection

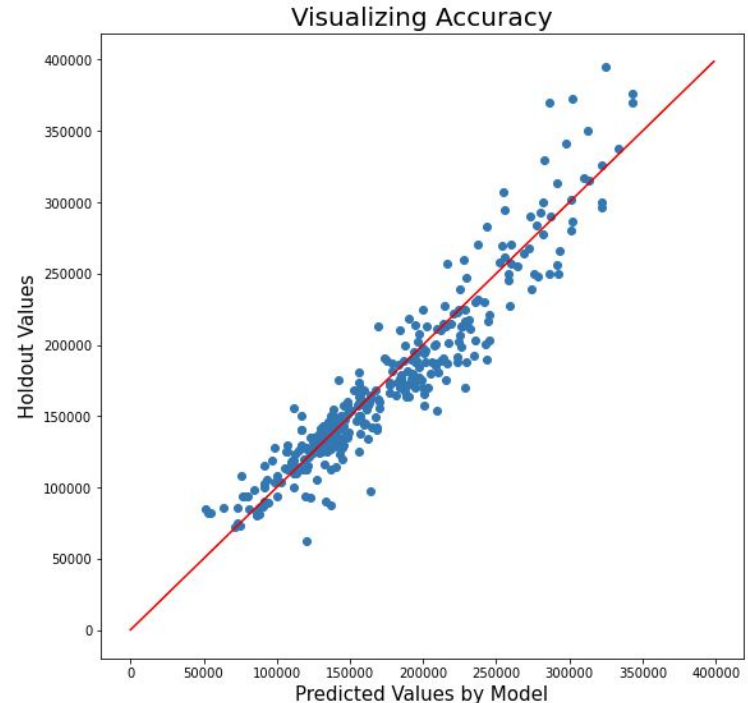


- In descending order:
  - Overall quality of house
  - General living area
  - Kitchen quality
  - Garage area
  - Total basement square footage
  - External quality and condition
  - Number of full baths
  - Fireplace quality
  - Basement quality and condition
  - House age

## Results of modelling



- Able to predict sale price within and error of \$31763.91
- Clearly not the most accurate model out there, with many predictions missing the mark by a lot, especially in the lower and higher extremes of the price range



# Conclusion and Recommendations



- Top 6 contributors to sale price
- Makes logical sense as areas are the most important factors of a house
- The values of other features such as aesthetic ones can be very subjective

Feature	Change in Price
General living area	\$19567.73
Overall quality	\$13265.37
Garage area	\$7667.61
Lot area	\$7559.17
Basement area	\$7502.06
House age	-\$10262.93