

# House Price Prediction



# Overview

Goal

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Findings

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Wrap Up



# How much is your home worth?



## & how can you sell your home for **more**?



# Ames, Iowa Housing Sales

A subset of the Ames, Iowa housing dataset, provided by Kaggle.

**1,294** home sales from 2006-2010

**42** variables, a mix of:

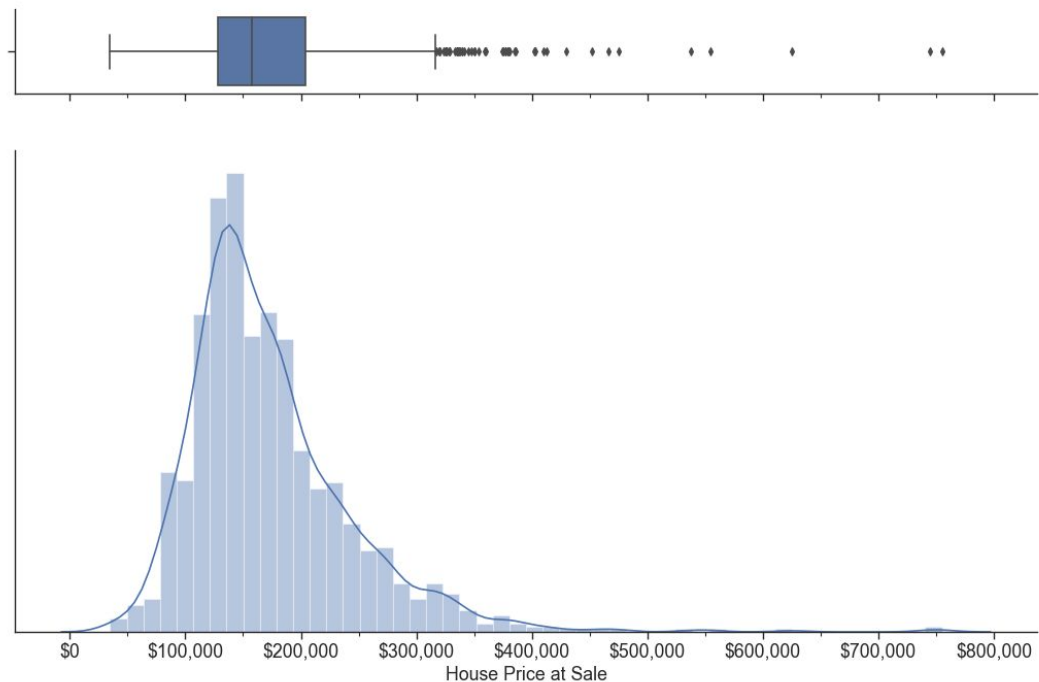
- :Square footage, lot size
- Overall Condition of home
- Has a pool, porch, fireplace, etc.





# Median Sale: \$157,950

Distribution of Housing Sales in Ames, Iowa



# Exploring correlation:

## Larger, newer houses get more \$\$

### Most Positively Correlated



### Most Negatively Correlated



# Ridge Regression Model Findings

Ridge regression models are **linear prediction** models that address how many of the variables about our house overlap.

On average, model predicts home sale prices within **\$18,000** of actual sale price. Model captures **86%** of variance in the final home sale price.



# Use model to price and **increase** price of home

- Add a pool (or should you?)
- Focus funds on home maintenance and upkeep

Overall **amenities** and **building quality** are the most important

Impact of Home Variables on Sale Price

	Coefficients
Has as least one Fireplace	\$1,480.72
Home has Porch	\$2,642.70
Remodeled in Last 5 Years	\$3,362.53
Home has Deck	\$4,001.47
Number of Full Baths in Basement	\$4,003.01
Heat Forced Air	\$5,229.30
Garage Cars Capacity	\$6,497.17
Overall House Condition	\$7,425.84
Overall Home Quality Ranking	\$13,385.75
Has A Pool	\$20,217.13





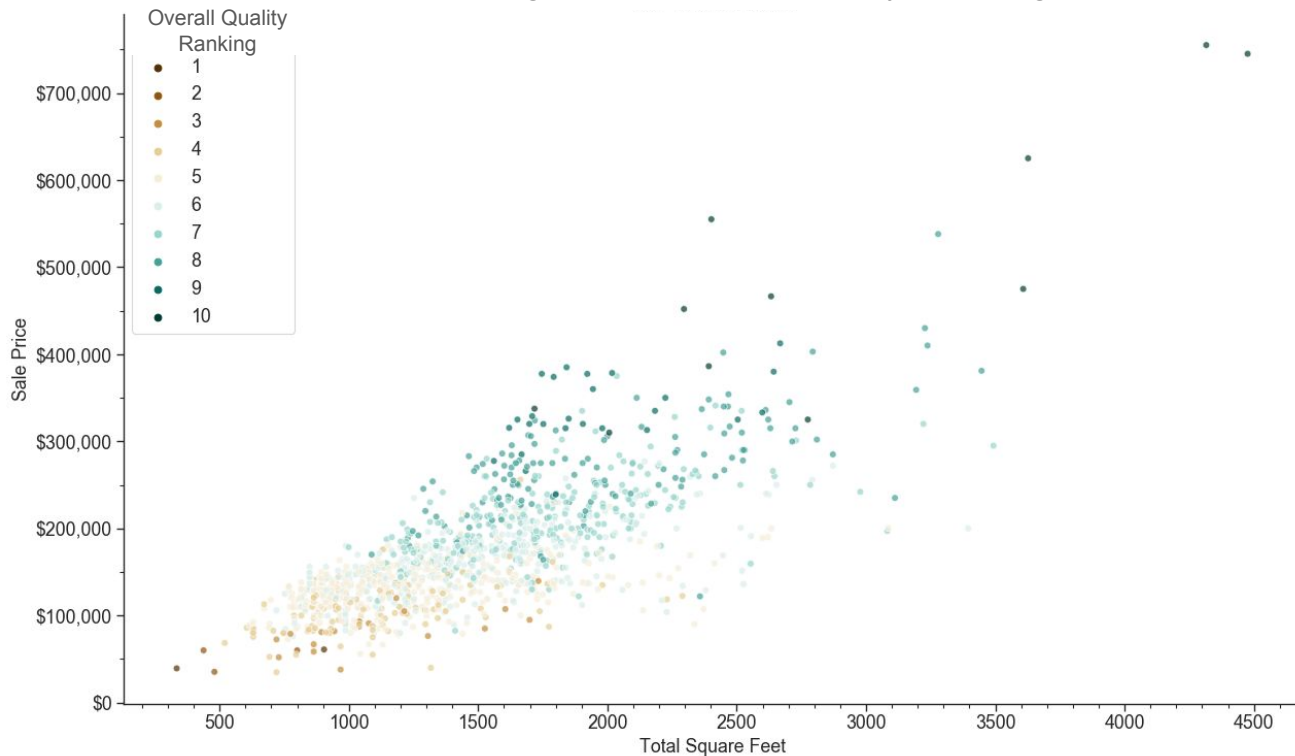
# Next Steps

Interaction terms

Categorical variables

Remove outliers

Relationship between Home Sale Price, Sq. Footage and Overall Quality Ranking



# Contact



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