

# Ames Housing Data

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# Problem Statement



IOWA  
HOUSE  
Ames, Iowa

Hired by a home appraisal company in Iowa to create a model that will return the true/ fair market value of houses.



# About Ames, Iowa

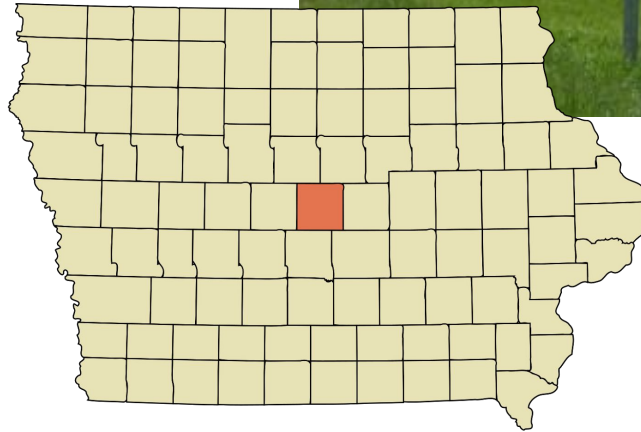
Population: 66,191

Best known as the home of Iowa State University

Named healthiest city in America

36 parks, 55 miles of bike trails and many golf courses

Located in the center of the state, approx 30 miles from capital Des Moines



# Data Assumptions

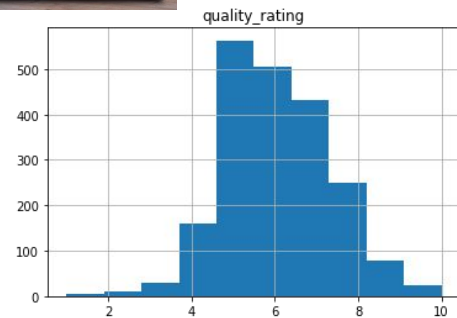
- Misc Features = Tennis Courts, Elevators
- 
- Pool QC = pool quality
- 
- Garage size = # of cars
- 
- Paved Driveway
- 
- Basement - finished or unfinished



# Ames Housing Features

Started with 22 “good” features:

Fireplaces	Has paved driveway
Has central air	Functionality Typical
Bedrooms	Building Type: Single Family, Townhouse End or Inside Unit, Two Family Conversion, Duplex
Quality Rating	
Kitchens	
Lot Sq Feet Living Area Sq ft	Porch Type: Open, Enclosed, Seasonal, or Screen
Baths	Garage Size
Finished Basement Sq ft	Year Built



# Predictive Model

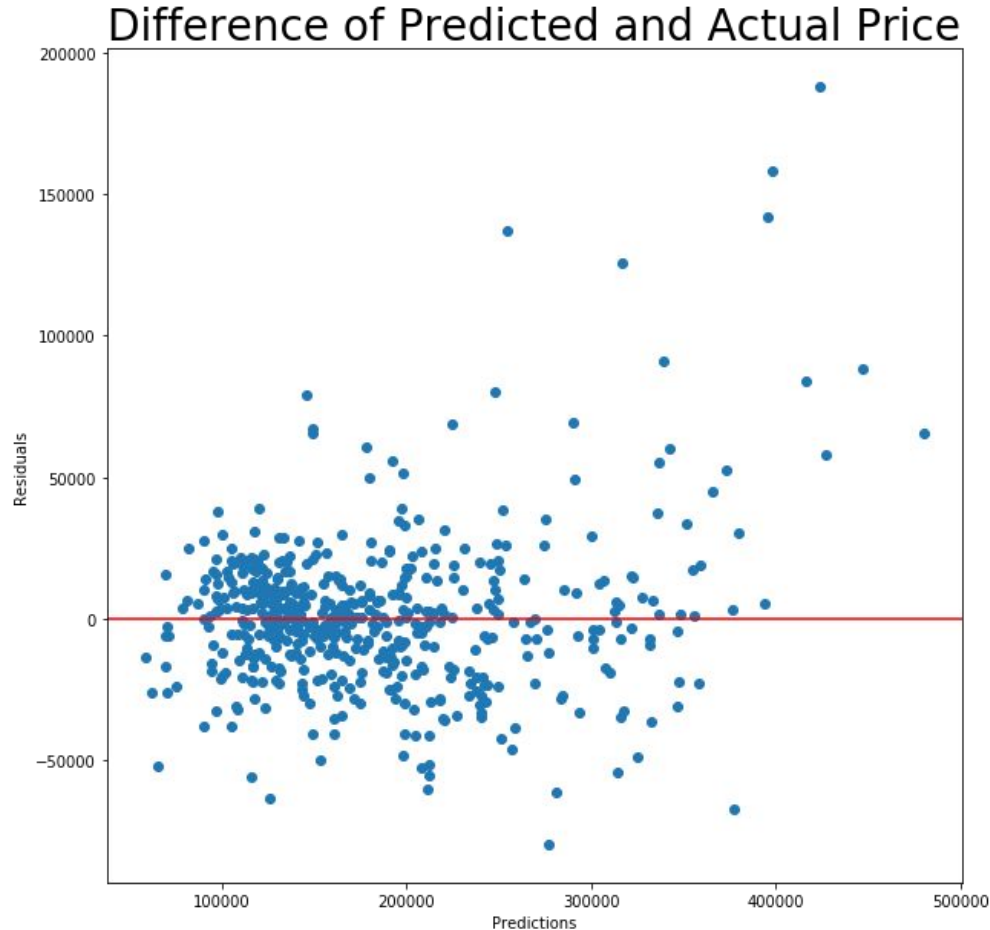
## Ridge Model

- High  $R^2$  score similar for the both the train and test data.

Train = 0.8885

Test = 0.8941

- Low variance and low bias
- Mostly homoskedastic
- A few outliers = not scoring as well on a few high price homes = still room to improve.
- RMSE = 27570





# Sources

Page 2 :image from : <https://iowahouseames.com>, photo from realtor.com,

Page 3 : <https://www.cityofames.org/about-ames/about-ames>, [https://en.wikipedia.org/wiki/Ames,\\_Iowa](https://en.wikipedia.org/wiki/Ames,_Iowa)

Page 4: Photo by Jimmy Emerson, DVM, borrowed from

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