

# Ames Iowa Housing

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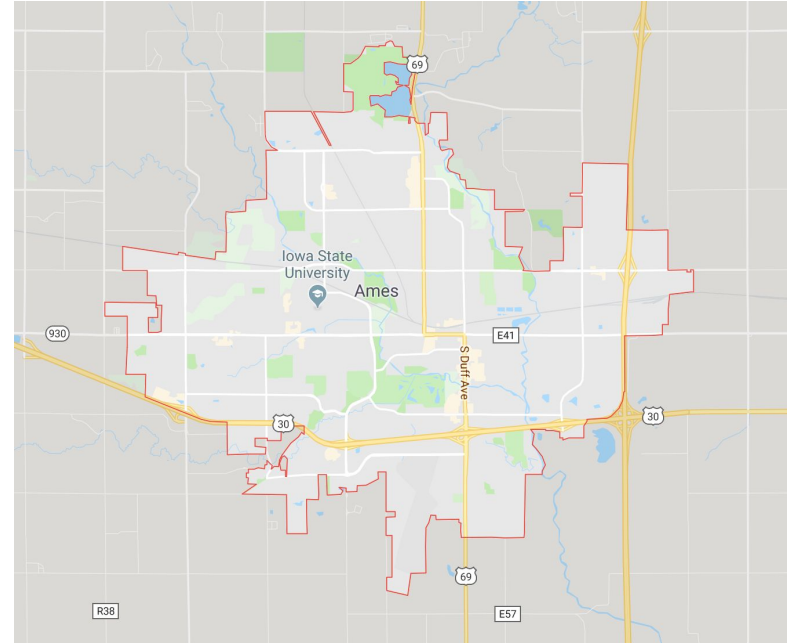
Nour Zahlan

# Introduction and Problem Statement

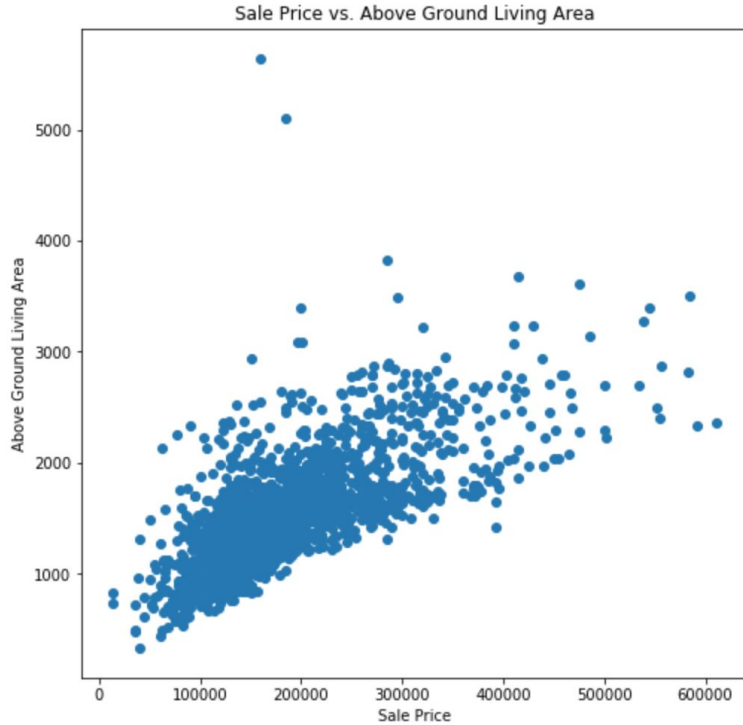
## Stakeholders:

- Ames, Iowa residents
- Real Estate companies in Iowa

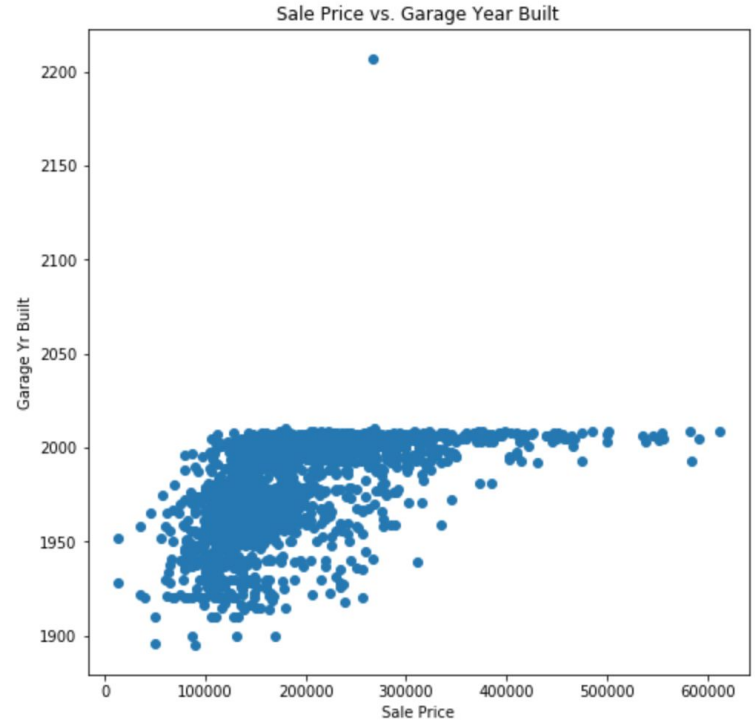
How do you set a reasonable price  
for your listing?



# Cleaning - Rows



Outliers

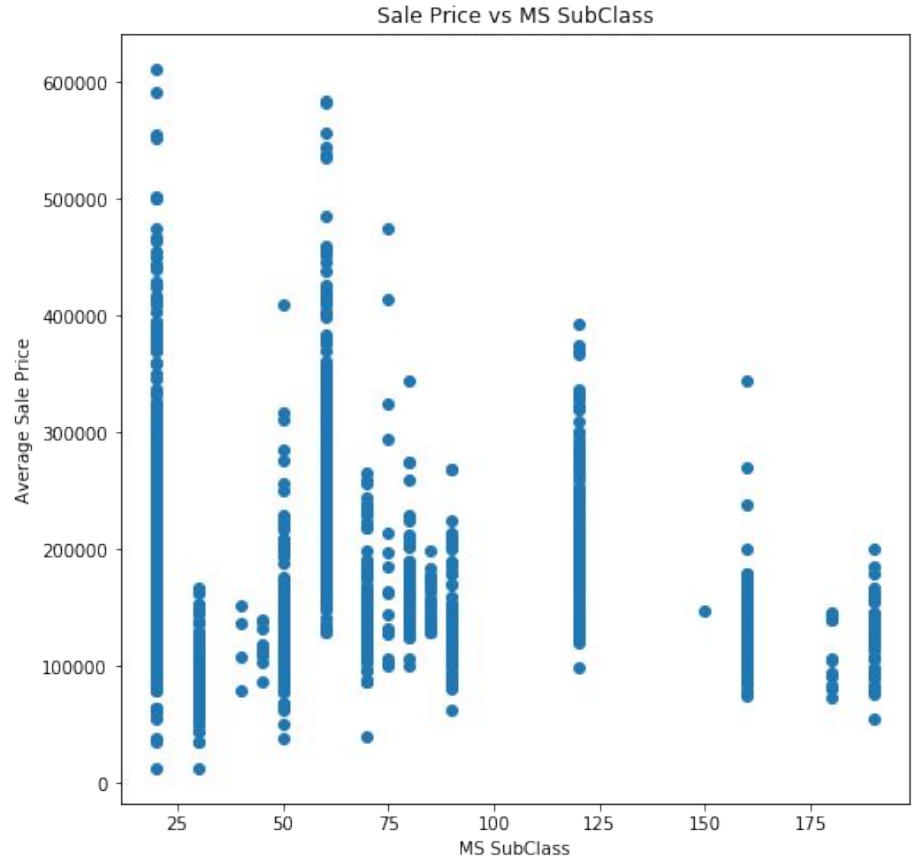


Abnormal Values

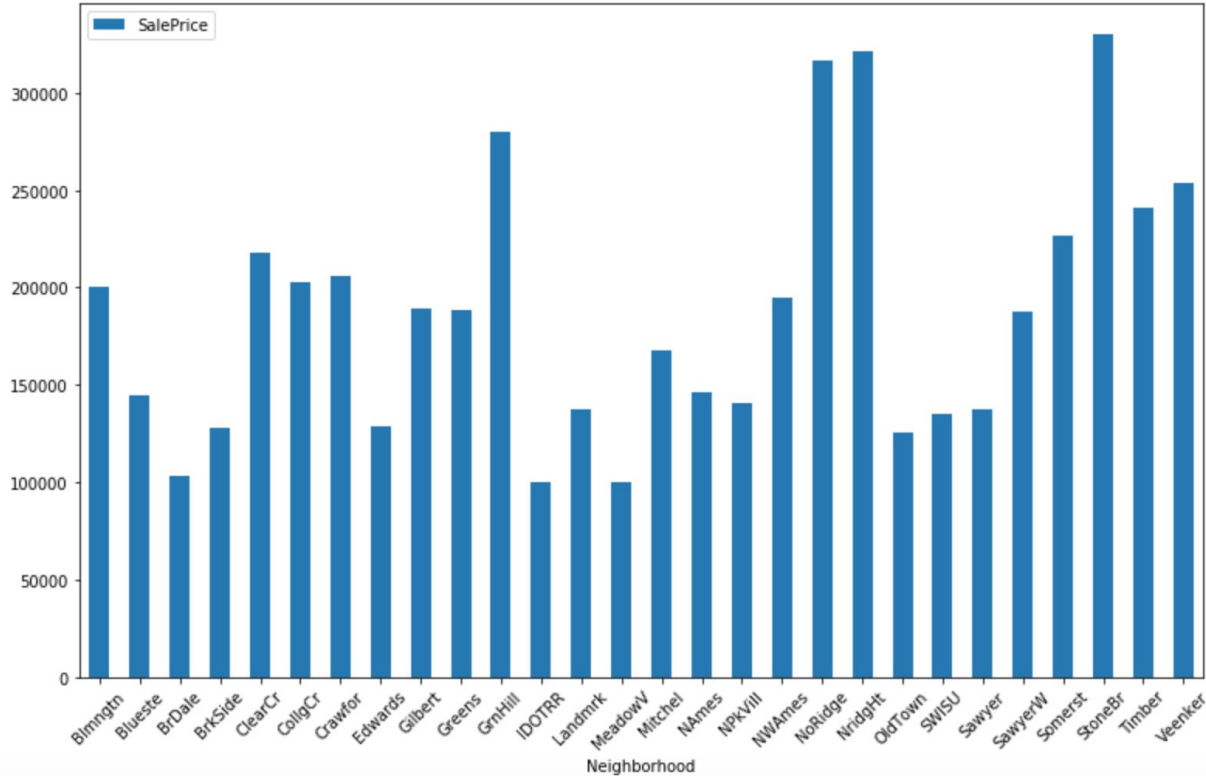
# Cleaning - Columns

MS Sub Class: Float but  
nominal value

PID: Identification number  
that has no correlation to  
the price



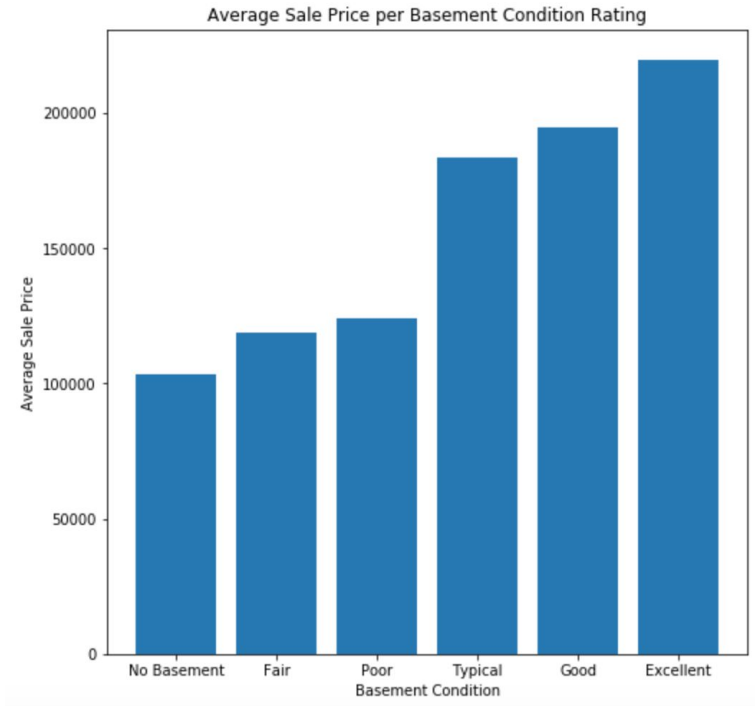
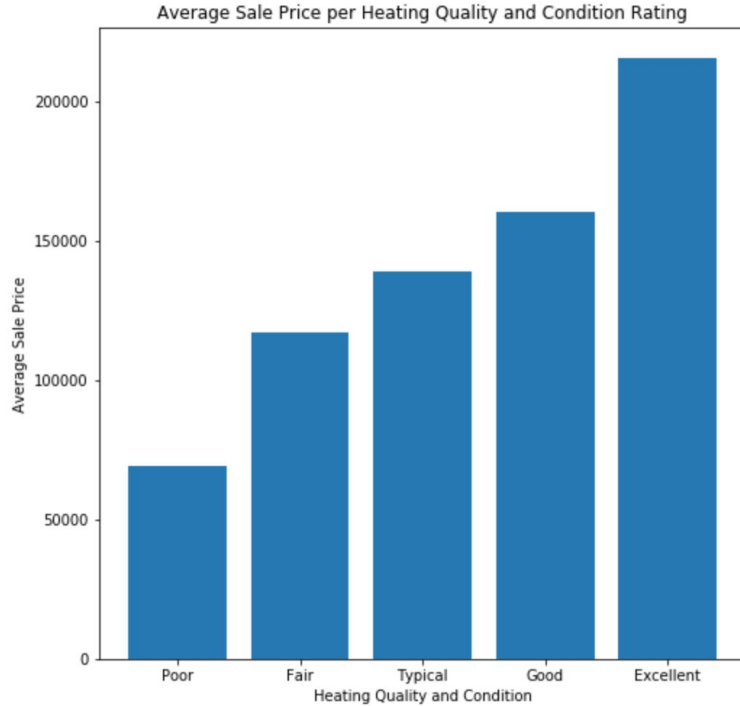
# Feature Engineering - Dummy Variables



How do you rank a  
Neighborhood?

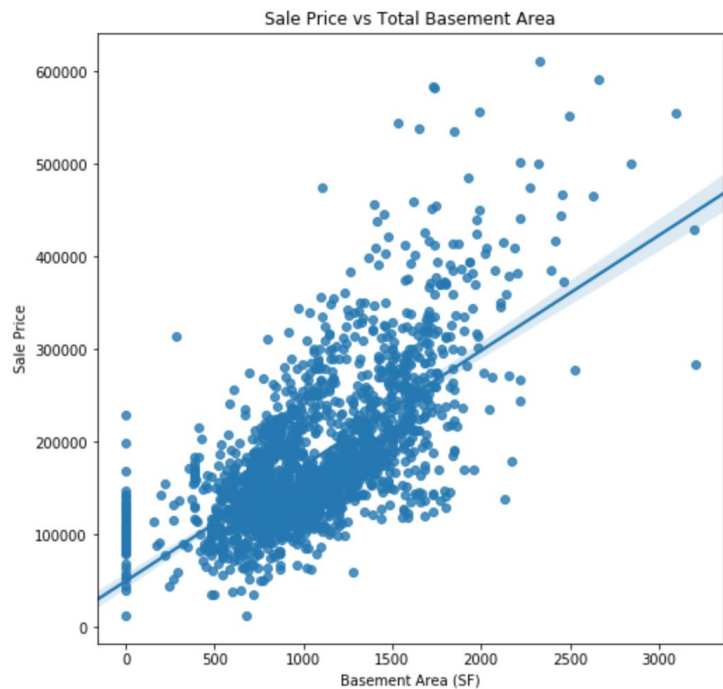
Create Dummy  
columns

# Feature Engineering - Rating Maps



Ordinal values - can transform into a rating out of 5

# Feature Engineering - Interaction Columns



0.67 correlation

Multiply by  
quality rating

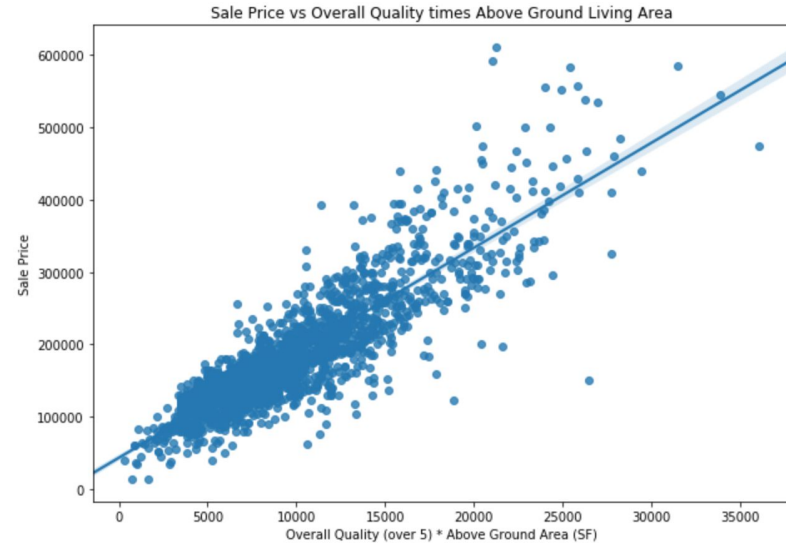


0.79 correlation

# Feature Engineering - Interaction Columns

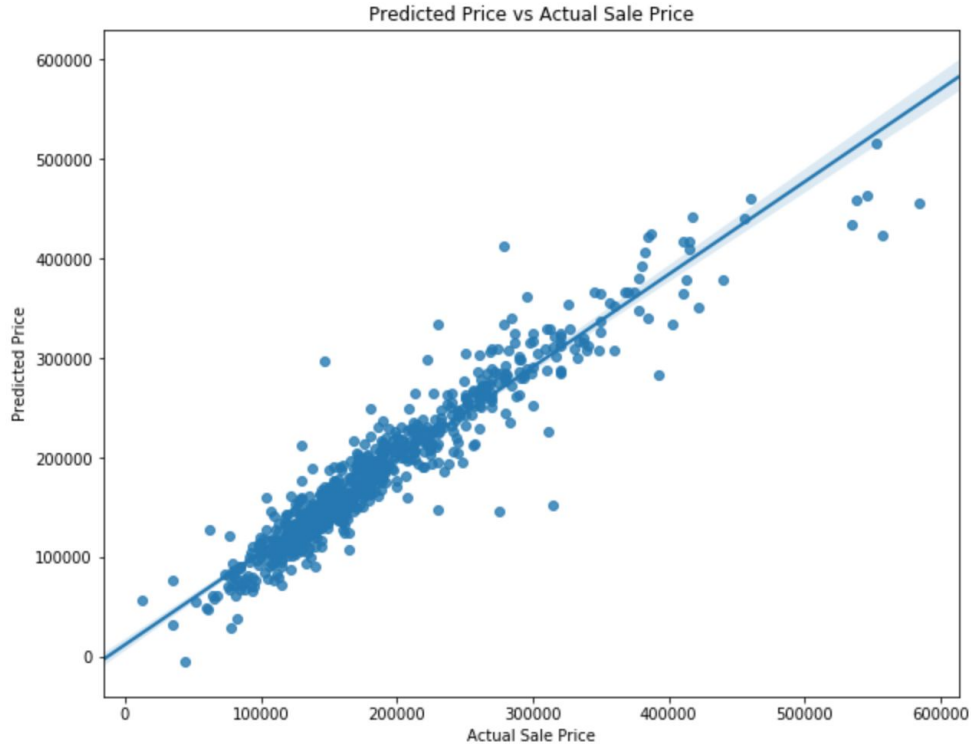


Multiply by  
quality rating





# Conclusions



How can you sell your house for a higher price?

Easy renovations: Heating, Basement, Garage

Cross Value Score = 0.917

Train Score = 0.953

Test Score = 0.906