

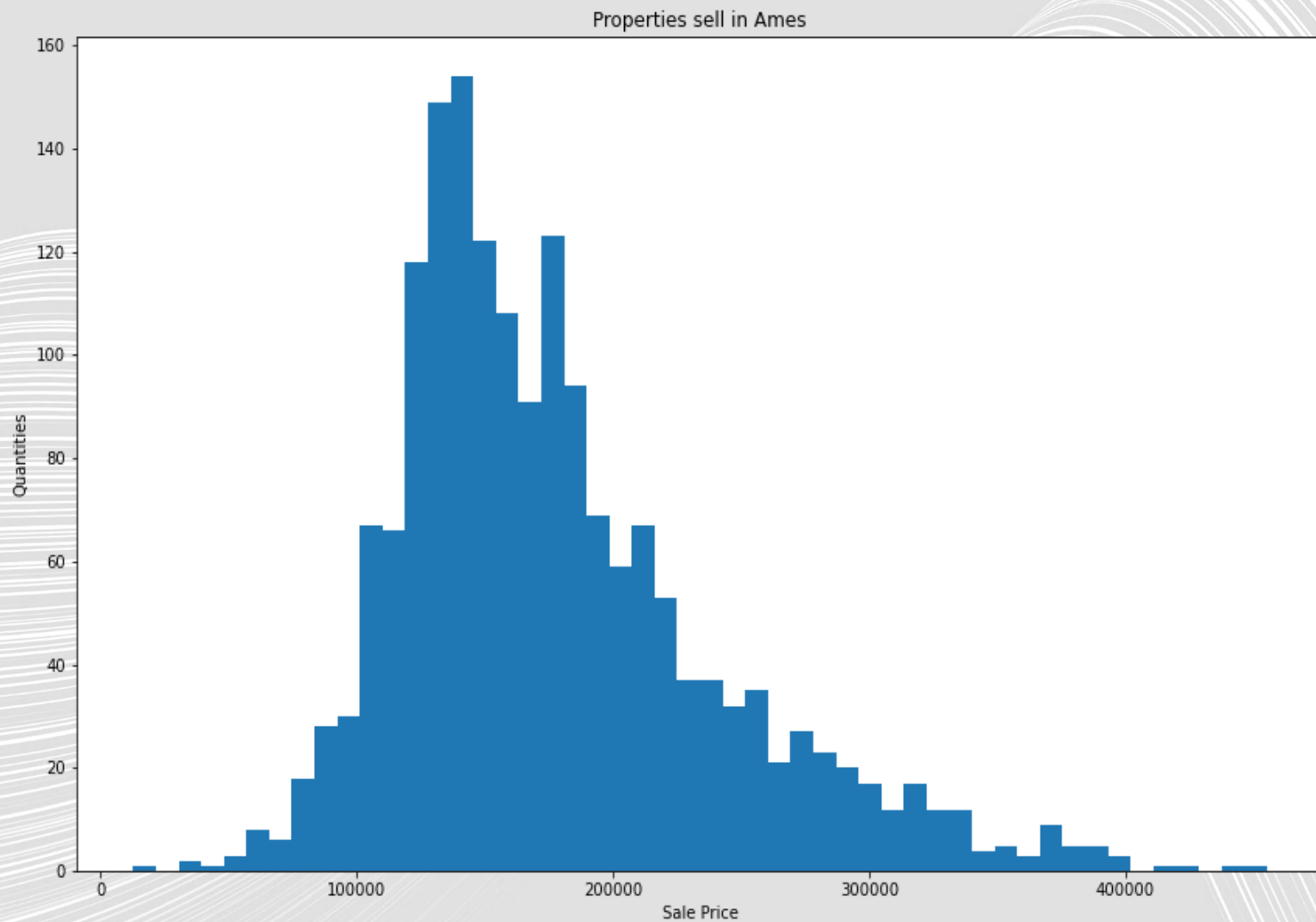


# PROJECT #2

## AMES HOUSING DATA

Silvia Resende  
Set 2022

# AMES DATA | DISTRIBUTION

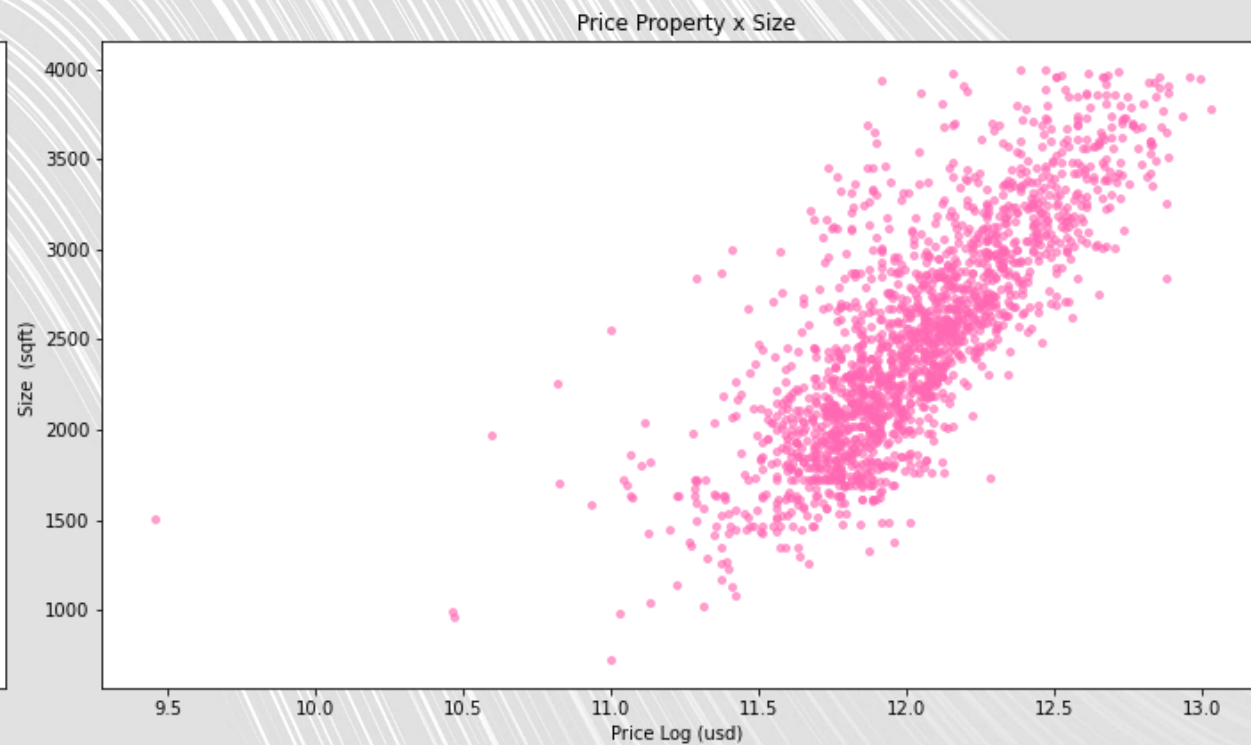


**Sales:**  
Histogram of sales  
properties for 2006 – 2010

# AMES DATA | OUTLIERS

## Outliers:

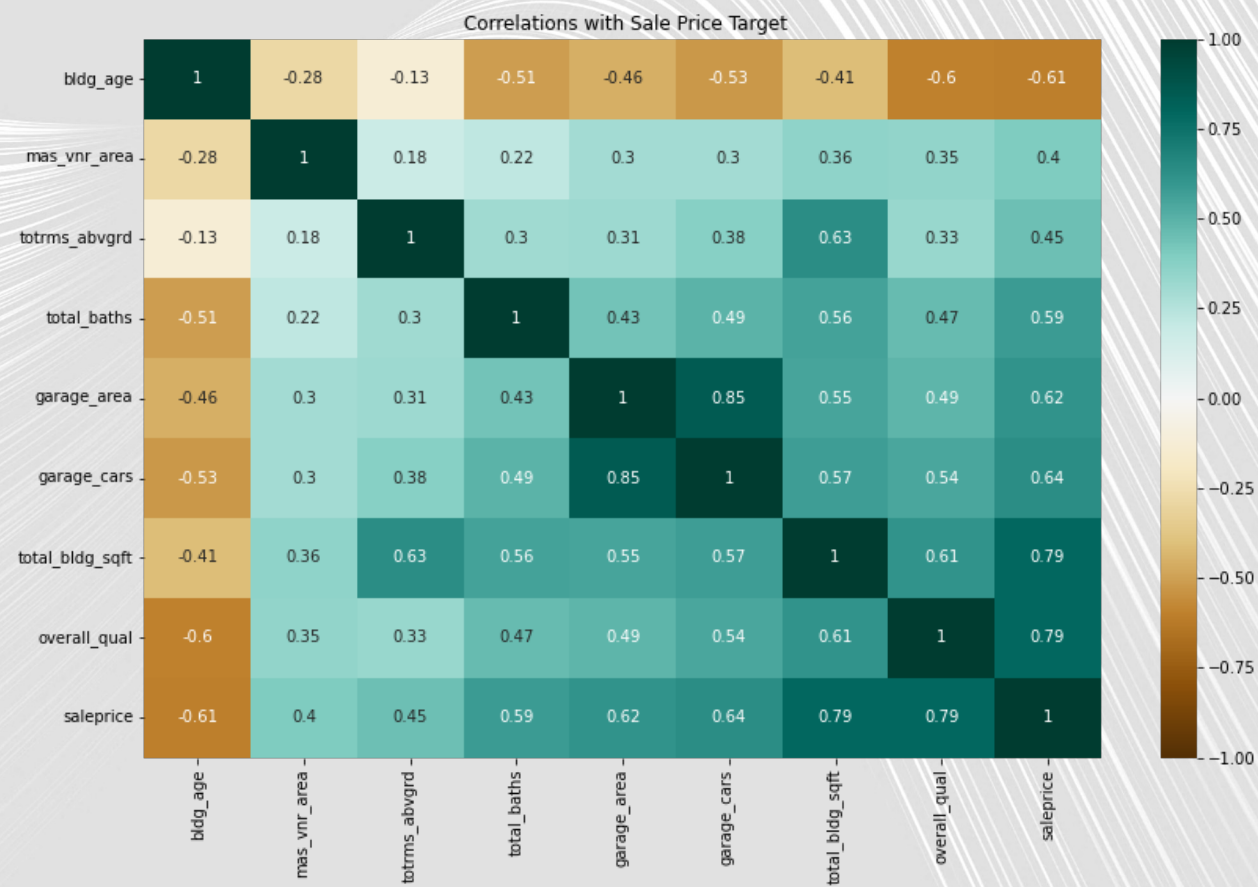
Behavior of sales' scatter plot after handling outliers





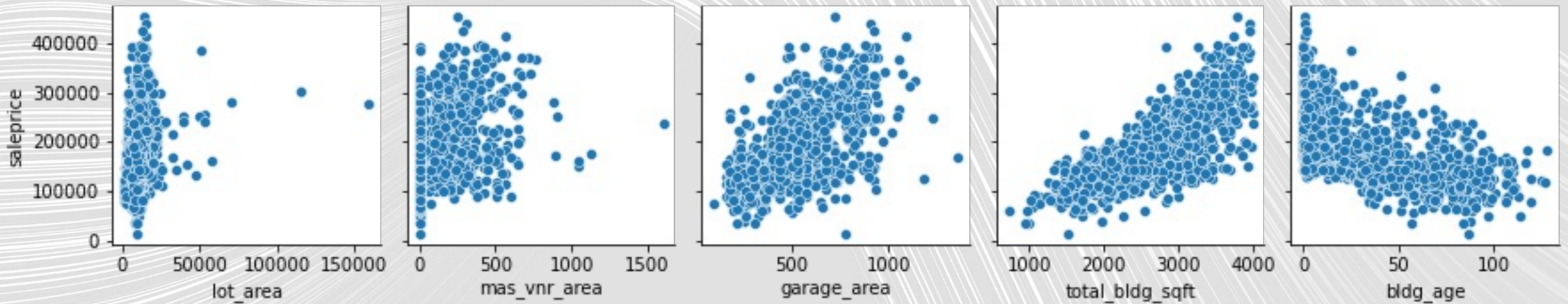
# AMES DATA | CORRELATIONS

Features with strong correlation between sale price



# AMES DATA | CORRELATIONS

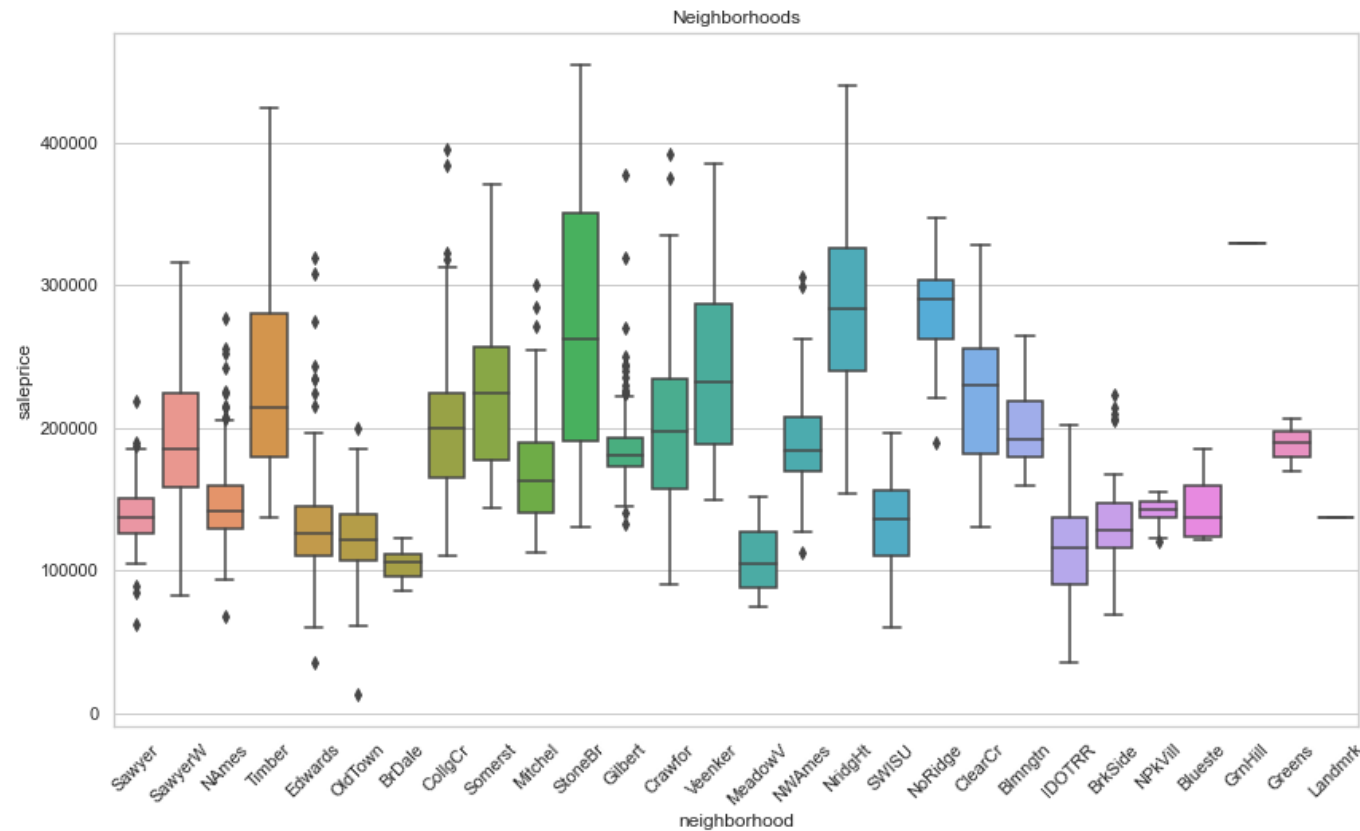
Features with strong correlation between sale price





# AMES DATA | CATEGORICAL

Ames' neighborhoods sales in box plots



Neighborhood Somerst  
Neighborhood NridgHt  
Neighborhood NoRidge  
Neighborhood Crawfor

# AMES DATA | CONCLUSIONS

## Model Metrics OLS:

**MAE:** 14809.870050728296

**MSE:** 416872303.5136811

**RMSE:** 20417.450955339187

**R2:** 0.8598253241533164

**Training R2:** 0.8598253241533164

**Validation R2:** 0.8422733142022257

**Difference:** 0.01755200995109063

**85.98%** of the variance/variability of our sale price,  
Can be explained by the features used to build our model.



# AMES DATA | INFERENCES

## Some coefficients:

Total baths: 6755.011

Total building sqft: 20466.00

Total rooms above ground: 649.45

Garage cars: 3048.89

Lot area: 4816.96

Neighborhood Somerst: 1466.12

Neighborhood NridgHt: 3718.50

Neighborhood NoRidge: 2380.81

Neighborhood Crawfor: 4918.21



# AMES DATA

## CONCLUSIONS | RECOMMENDATIONS

- After analyzing the data, we can see that some variables are more important than others in determining the value of real estate prices. For example, the general condition of the property carries more weight than adding a few feet to the size of the property.
- Another conclusion that we can consider is that if you want to add value to the property, it will be more efficient to include one more bathroom than a parking space.