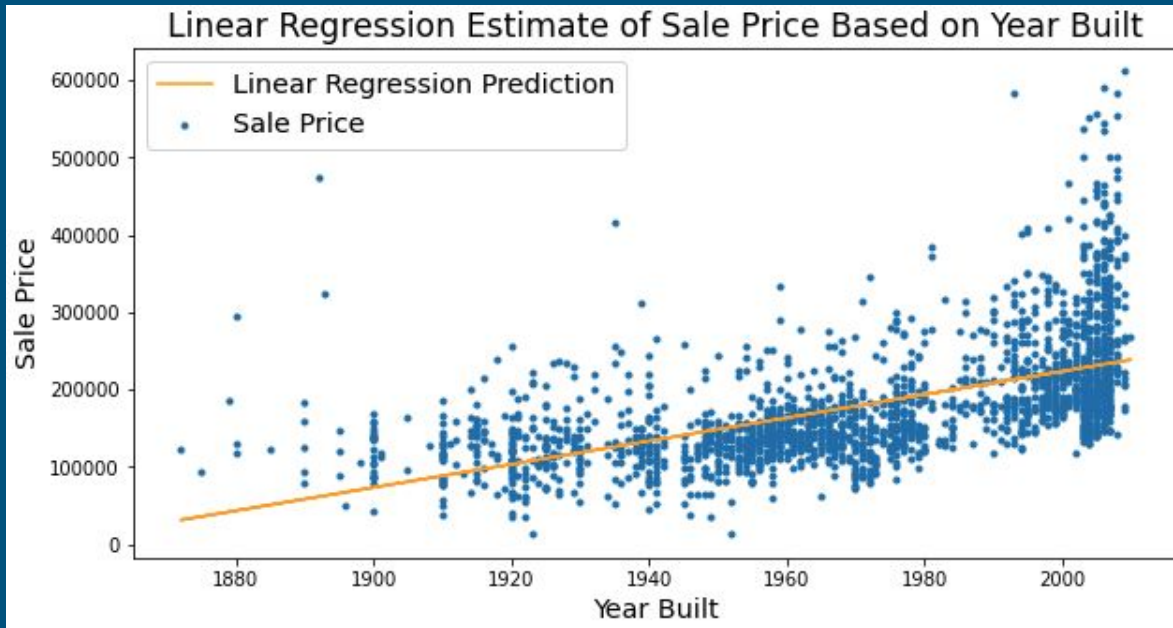# Home Values

An investigation of factors that most impact sales prices.

Best ways to increase home value?

Problem: How can we recommend best strategies to increase the value of a home?

Method: Linear Regression… with several features.

Linear Regression Estimate of Sale Price Based on Year Built

How good is the model?
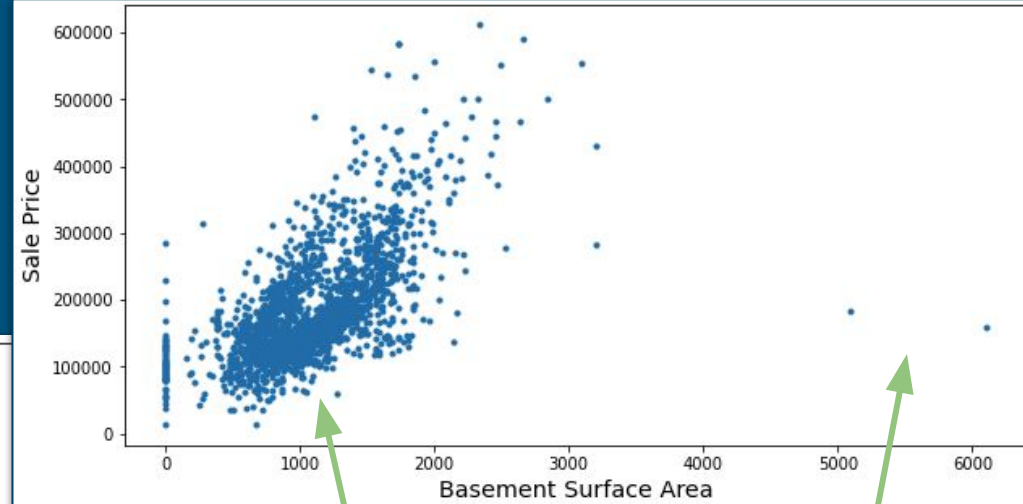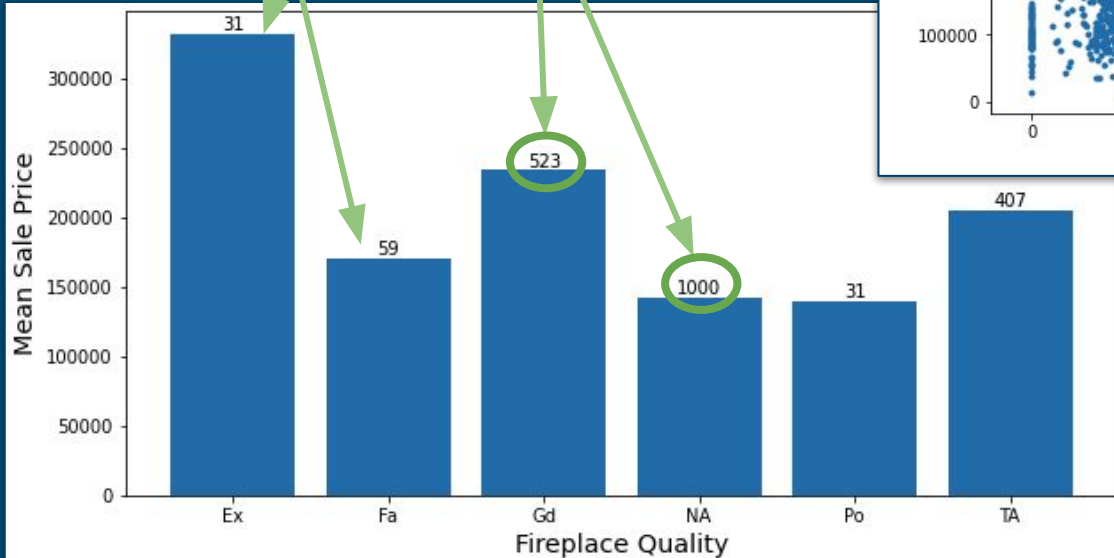
Baseline: Average all home costs.

R^2: How much behavior does our model capture that the baseline misses?

RMSE: On average, how close are the model's predictions?

Finding the Most Impactful Features

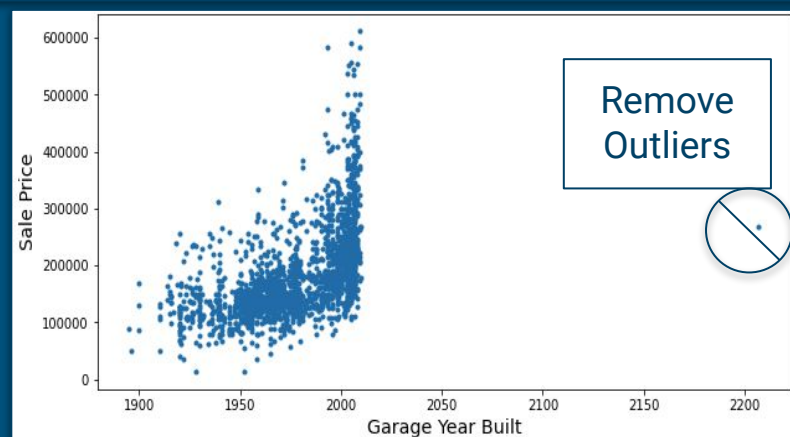Category affects price.
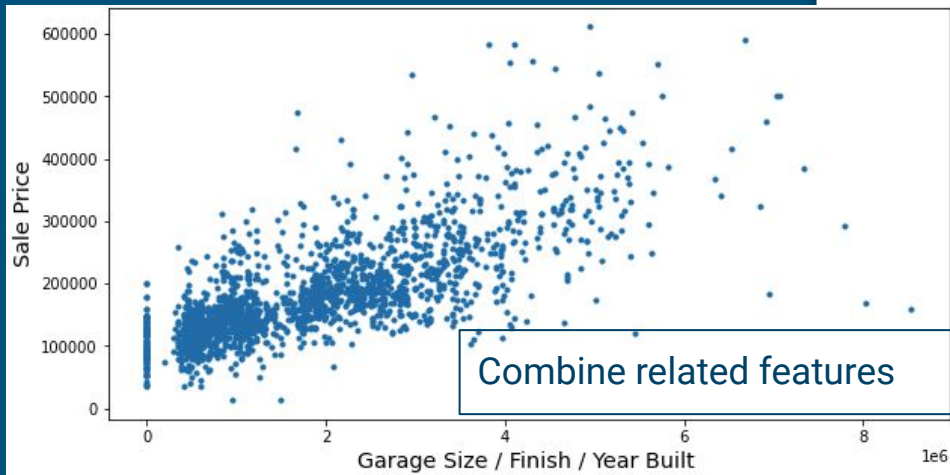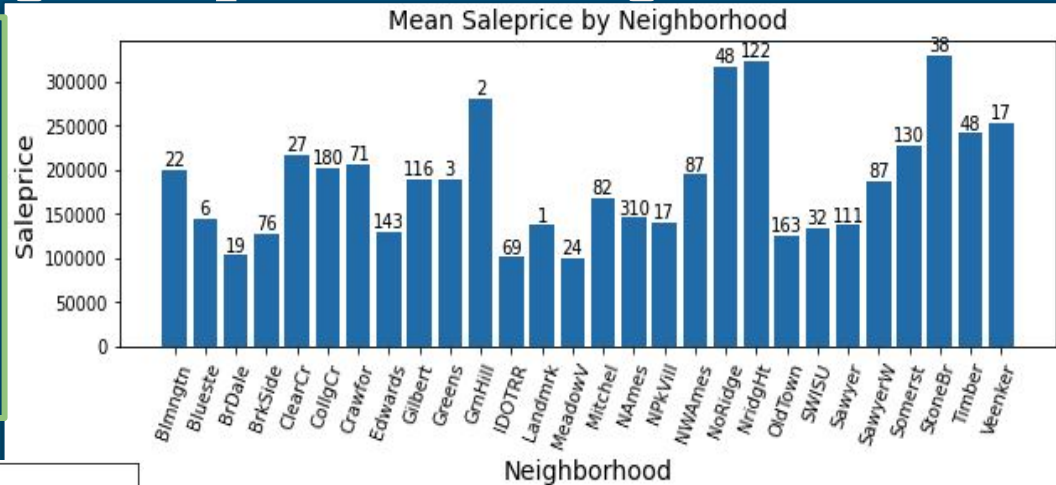
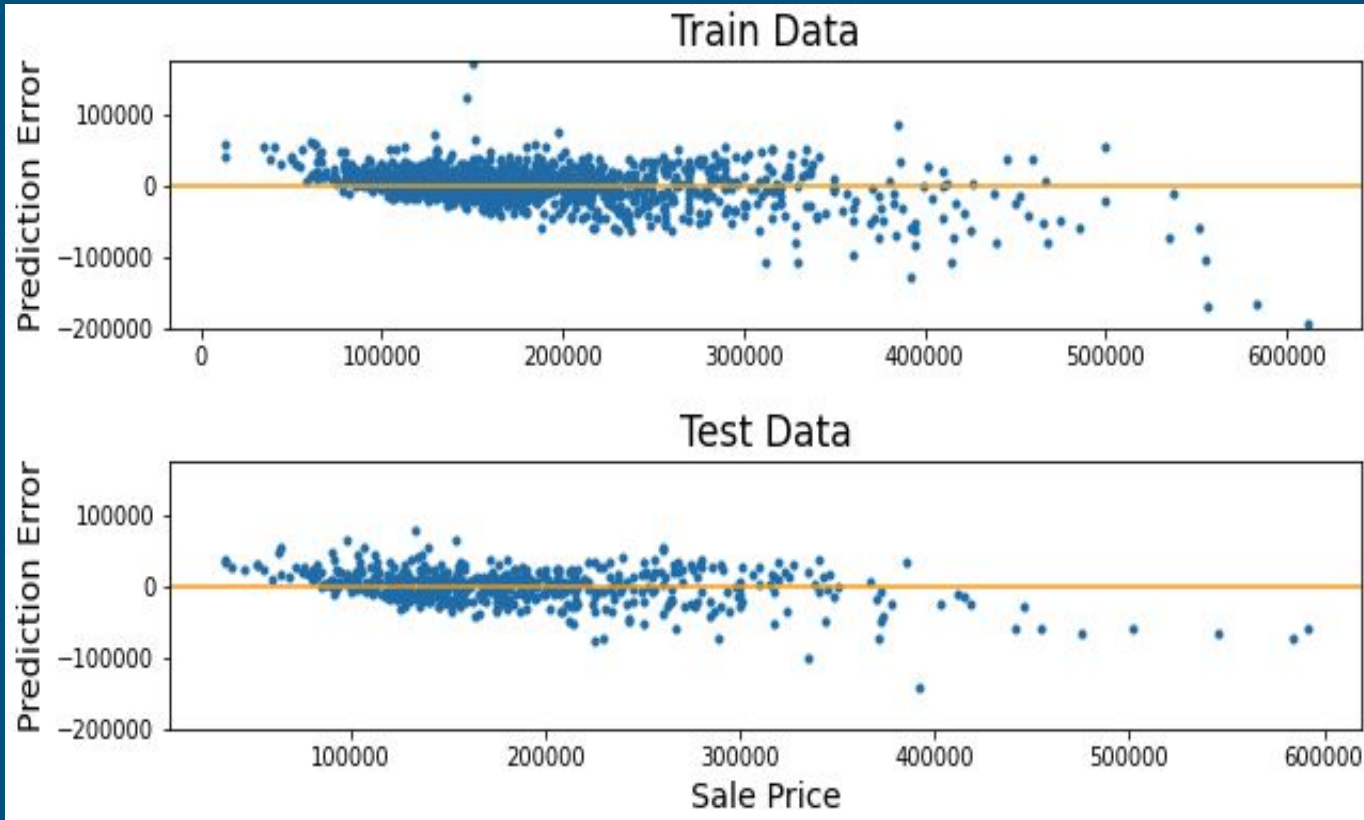Many homes in different categories.

Clear relationship with Sale Price

Few Outliers

Feature Engineering: Prepare for Regression

- Expensive: 1 standard deviation above mean.

- Cheap: 1 standard deviation below mean.

Mean Saleprice by Neighborhood

Combine related features

Remove Outliers

Results

How good is the model?

R^2 = 0.92: 92% of variation accounted for (vs. baseline).

RMSE = $22,490.92. The average error in our predictions.

Conclusions

Most important features:

1. Overall Quality
2. Aboveground living area
3. Year built
4. Garage age/size
5. Property size
6. Basement size/finish/age
7. Fireplace
8. Neighborhood

Recommendations:

1. Living space is king
2. Go modern
3. Location, location, location…
4. Fireplaces are nice! At least in Iowa

Questions?