

# Housing Data Analysis Ames, Iowa

Presentation for General Assembly Project 2

Created by Landry Houston

# The Problem

## Identify Features

**What features affect housing prices?**

A local construction company is looking to build new homes that meets market demands and are priced competitively.

## Develop a Model

**Create a model to predict sale prices.**

Model needs to be precise and can be applied to datasets from surrounding cities.

## Report Findings

**Present Information.**

The company needs information soon to start building. What did I analyze from the data?

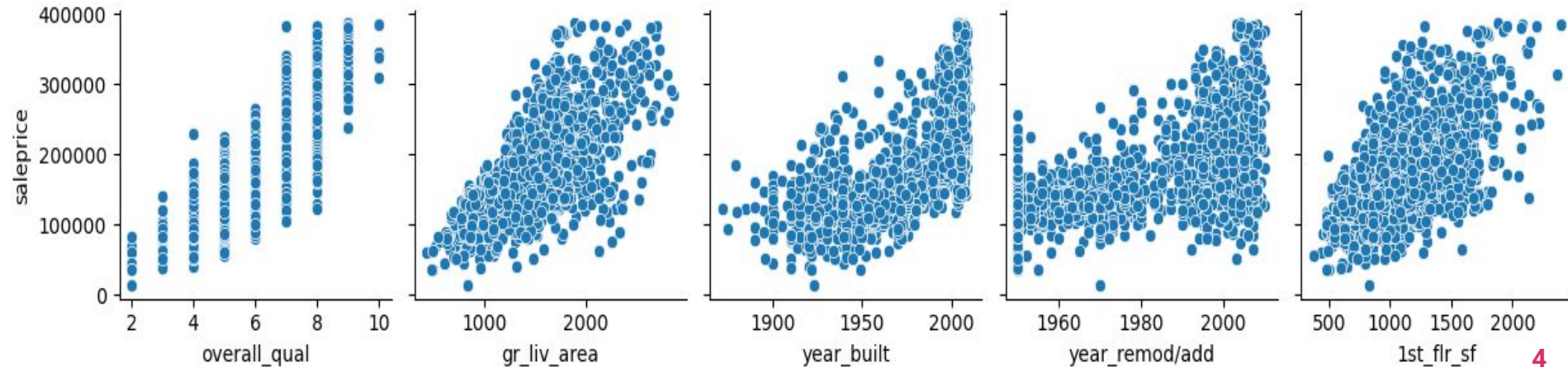
# Data

I analyzed two datasets with 81 features each, detailing diverse home characteristics.

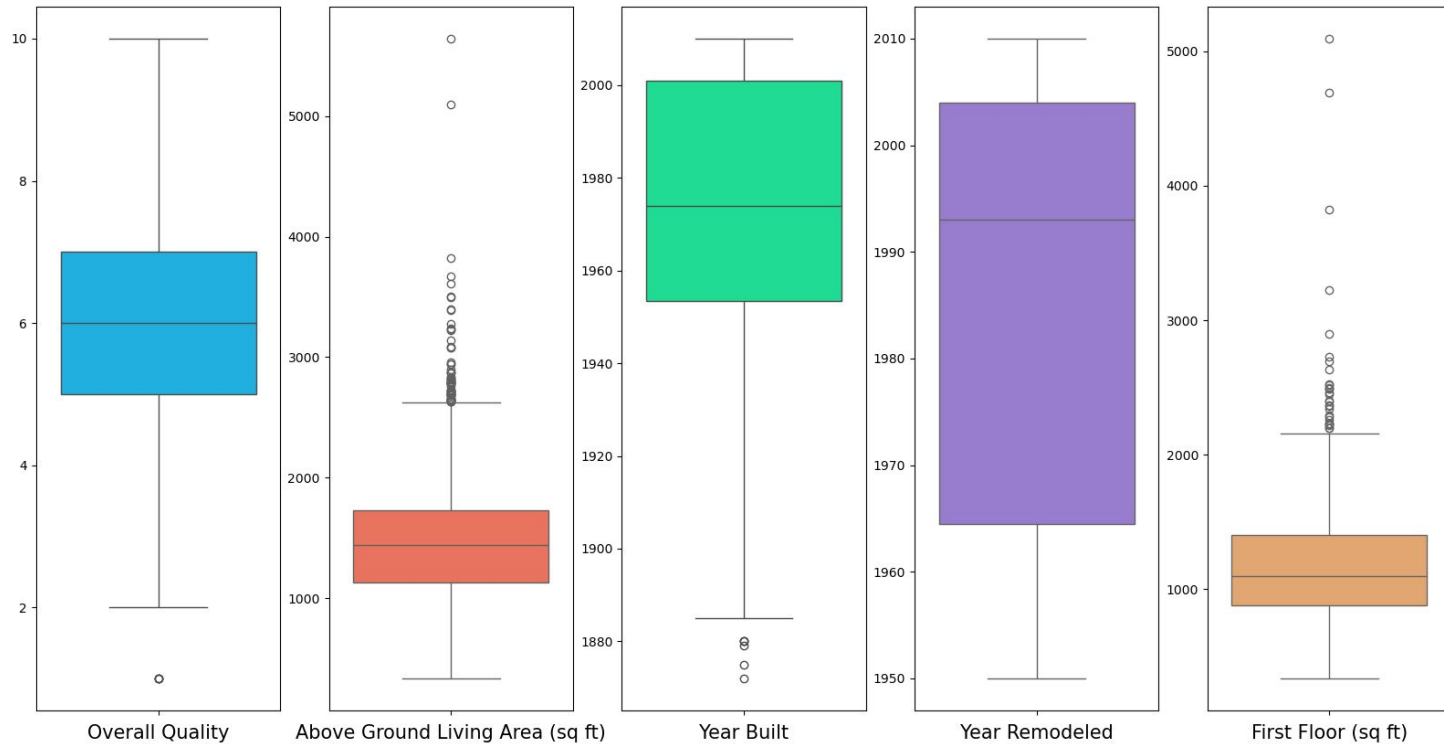
---

# Findings

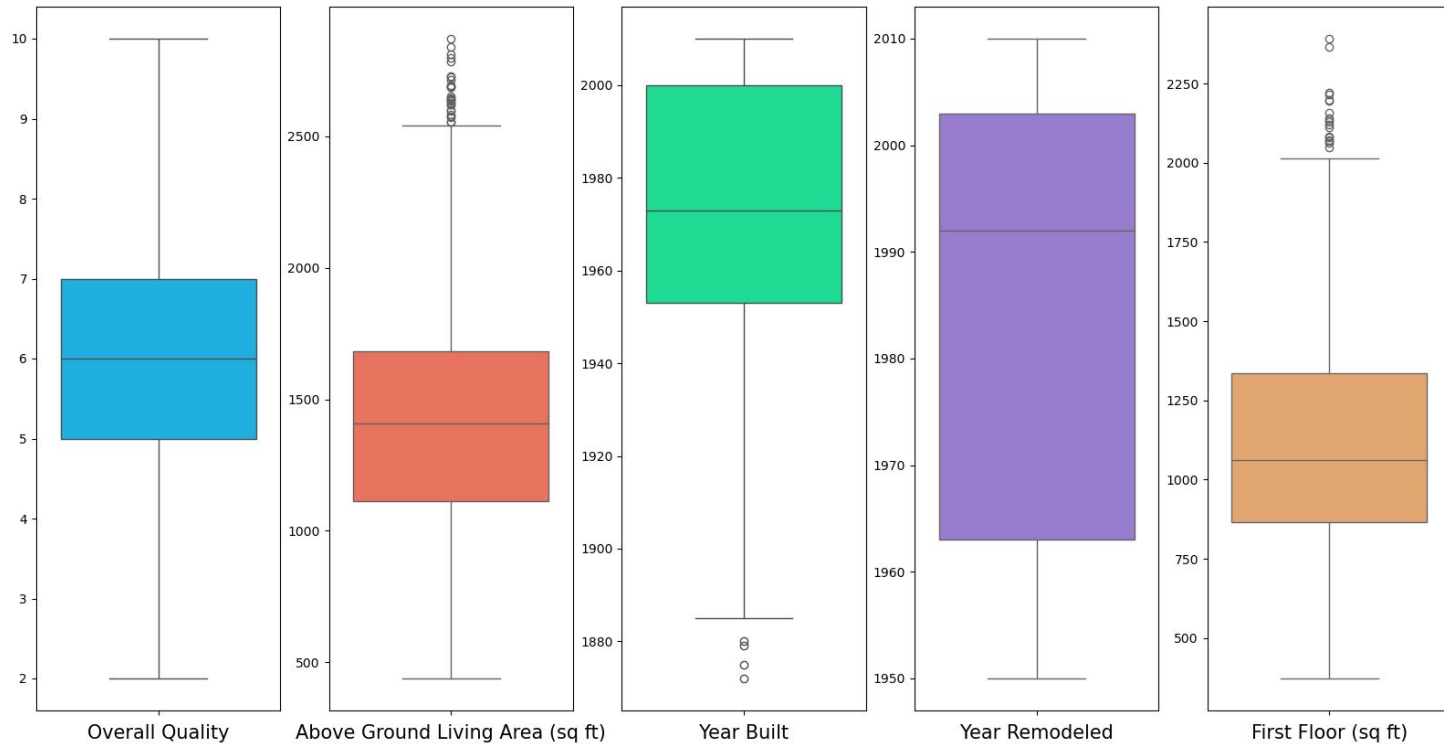
- **Average Sale Price is \$171,000**
- **48% of homes feature a fireplace**
- **Average home deck size is 84 sq ft**



## Top 5 Features



## Top 5 Features

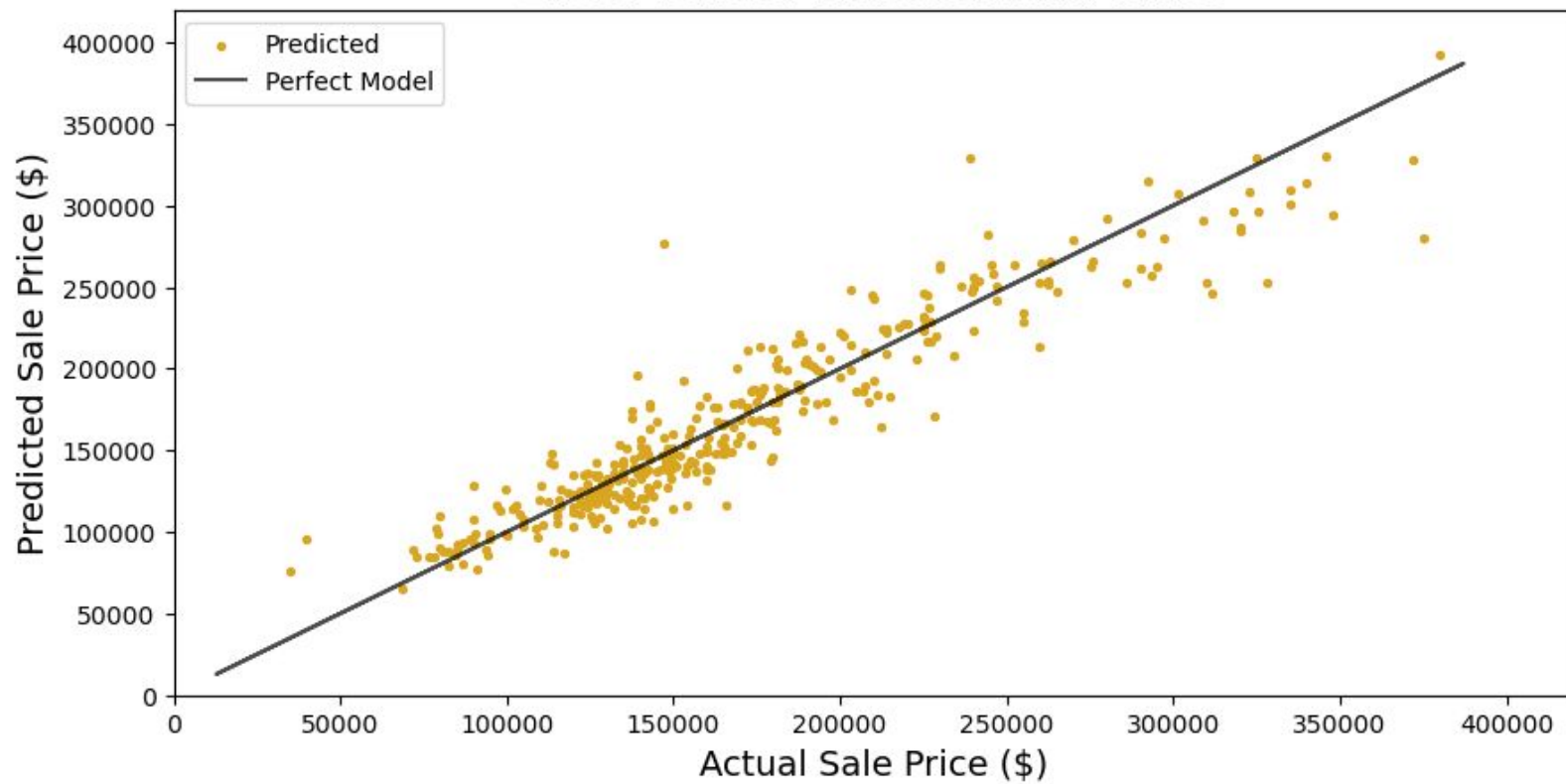


# Model

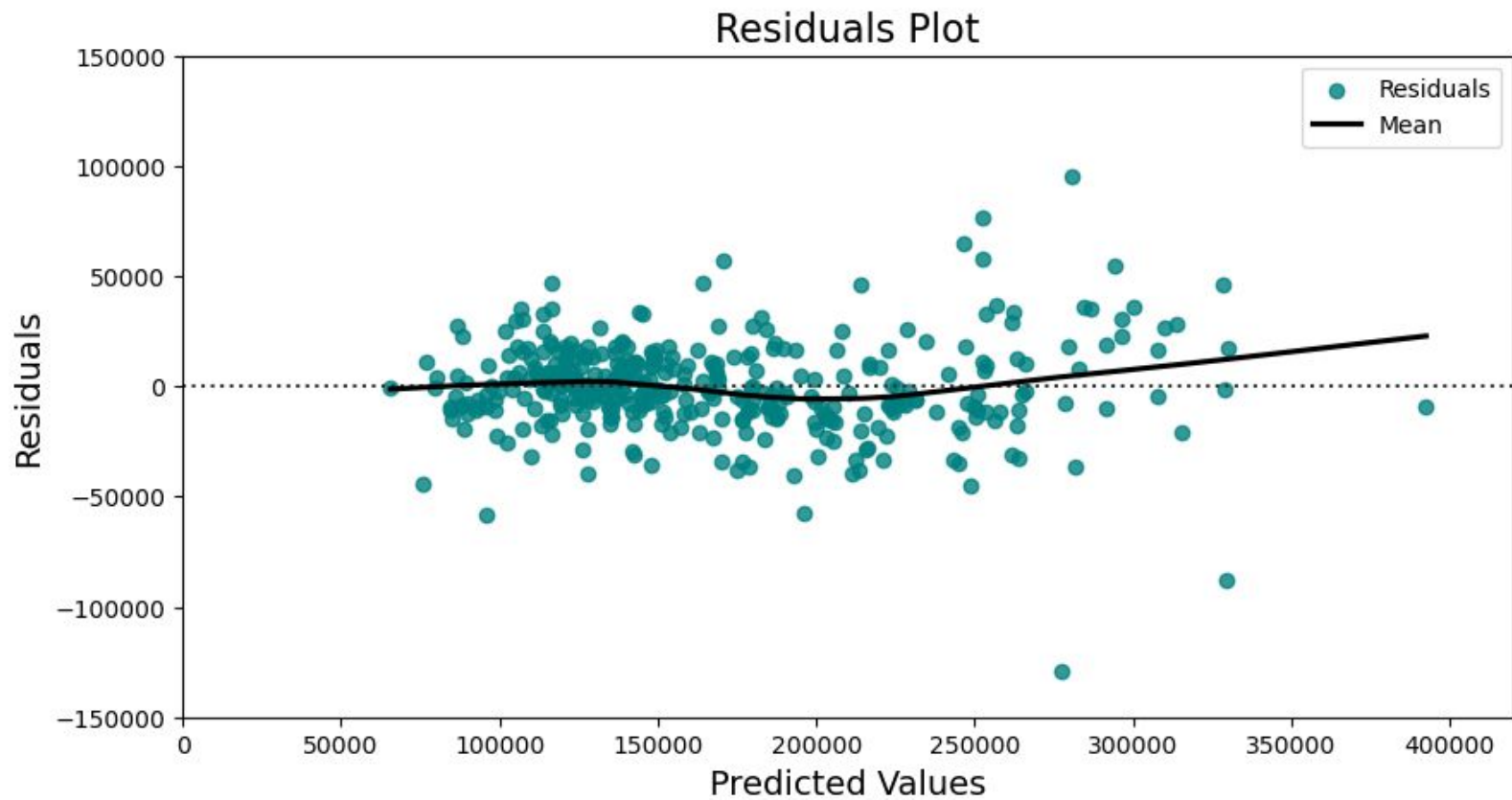
I created a Lasso Regression model using polynomial features to predict Sale Price

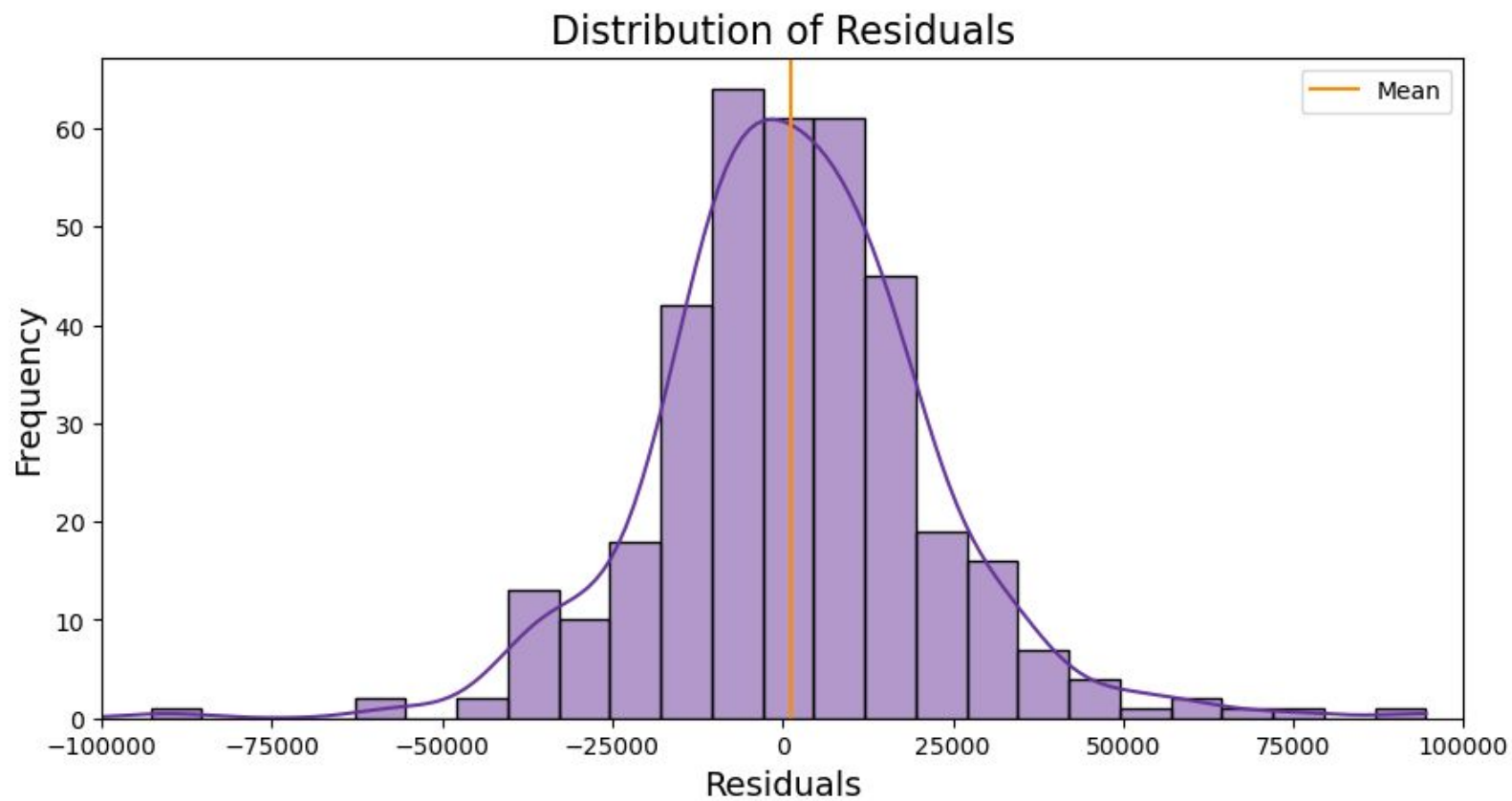
- **Cross Val Score** of 0.873
- **R2 Score** of 0.882
- **RMSE** of 21,163.97

Lasso Predicted Values vs. Actual Values





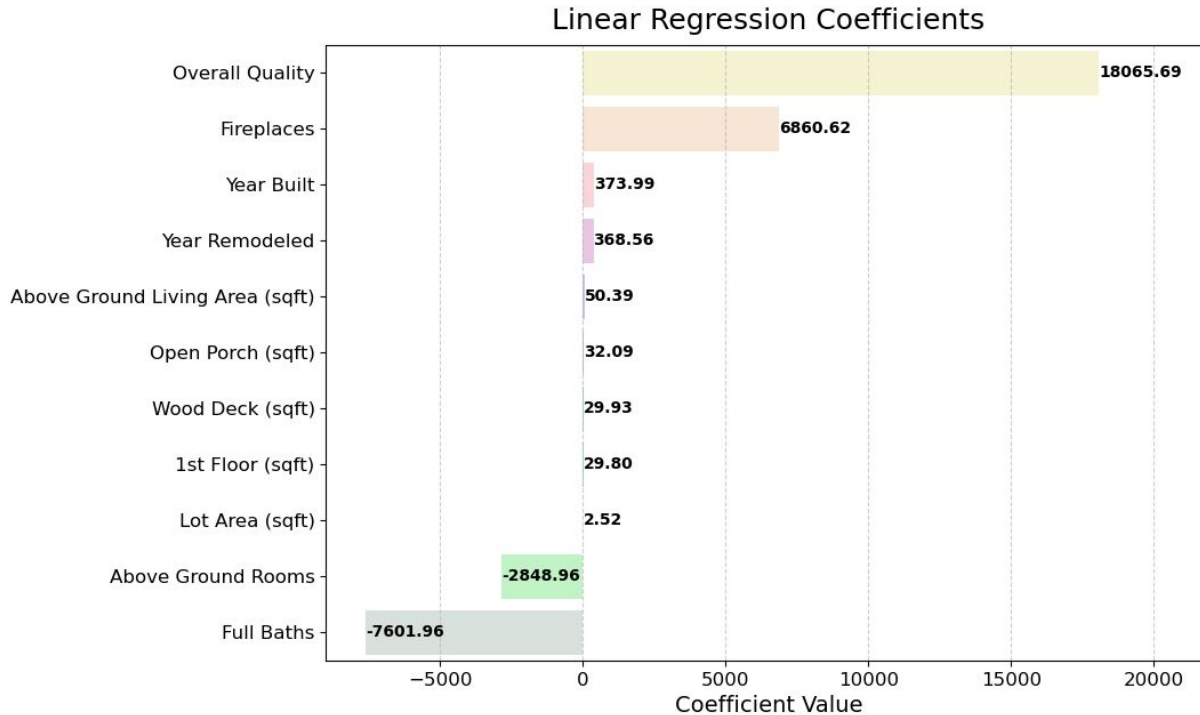




# Conclusions

Feature	Correlation
Overall Quality	0.810
Above Ground Living Area sq ft	0.694
Year Built	0.633
First Floor sq ft	0.587
Year Remodeled	0.585
Full Baths	0.552
Fireplaces	0.448
Rooms Above Ground	0.446
Open Porch sq ft	0.393
Lot Area sq ft	0.355
Wood Deck sq ft	0.320

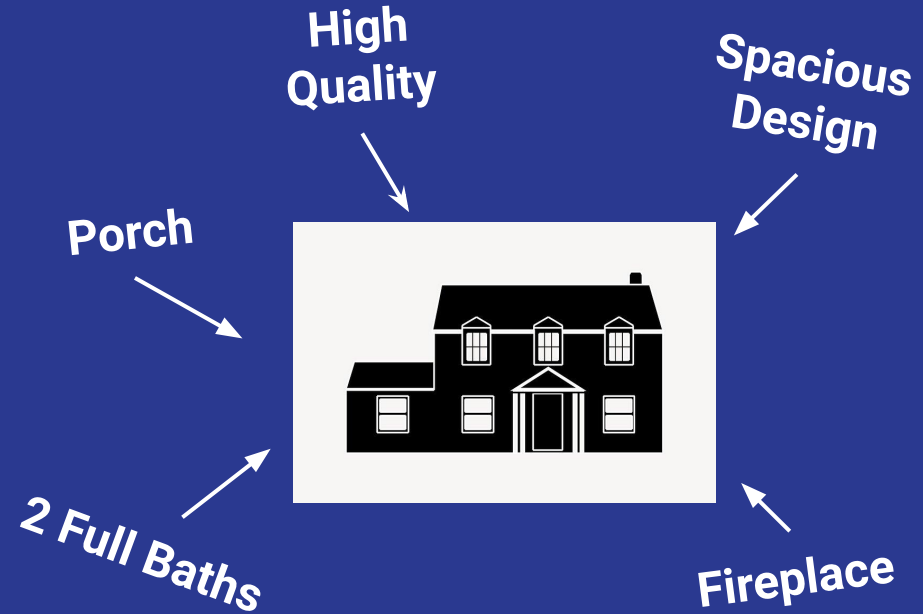
# Conclusions



Holding all else constant,

- For every 1-unit increase in Overall Quality, Sale Price increases by \$18,065.69
- For every 1-unit increase in Fireplaces, Sale Price increases by \$6,860.62

# Recommendations



Price between \$150,000 and \$180,000



# Thank You

## Questions?