

So, You Want
to Buy a House

What features increase the value of a house the most?

Info About the Data

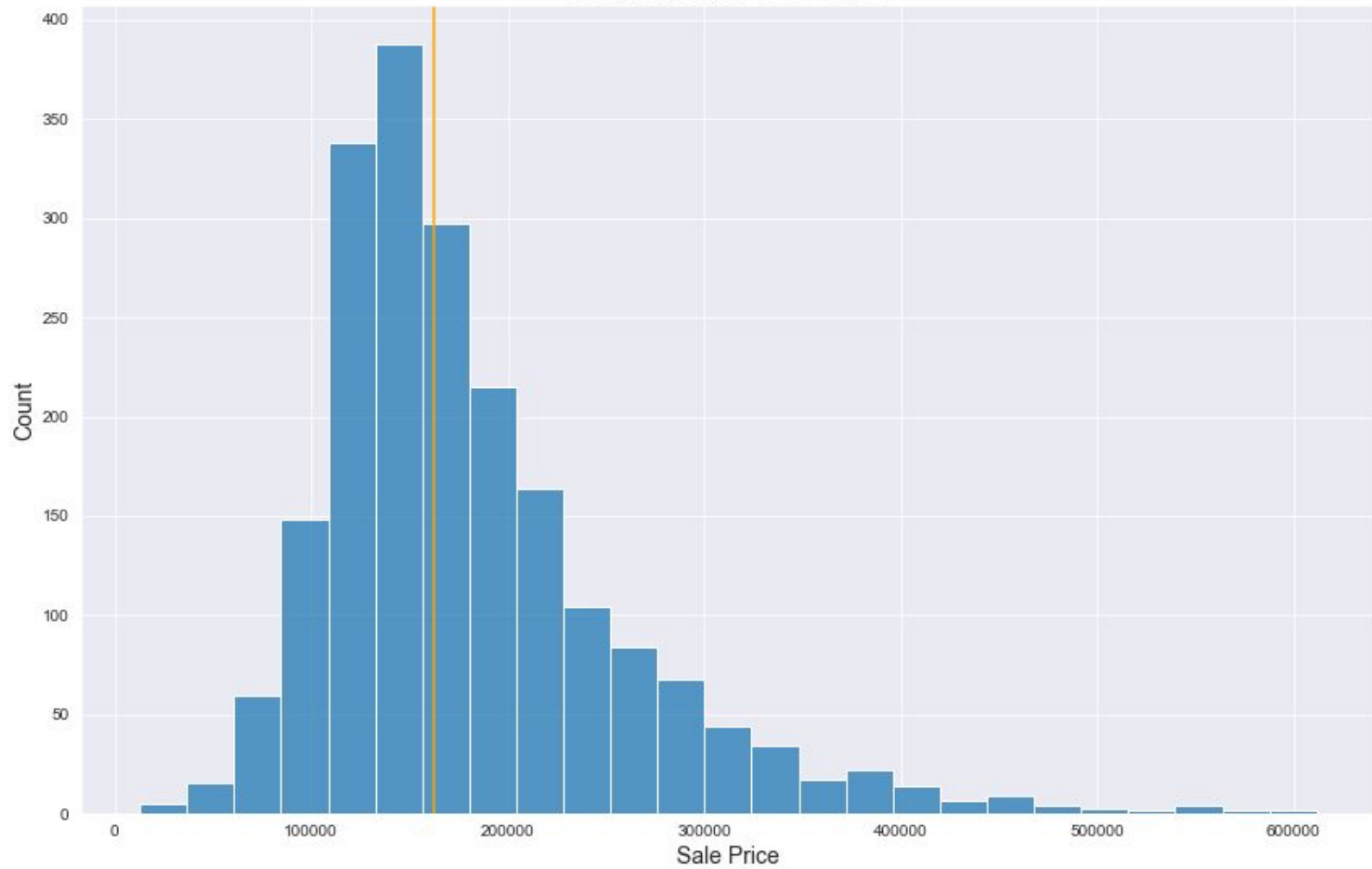
- House sales between 2006 and 2010
- Ames, Iowa
- 81 Variables

Outline

- Explore the data
- Identify areas of significance
- Predictive model
- Offer recommendations

Let's dig in!

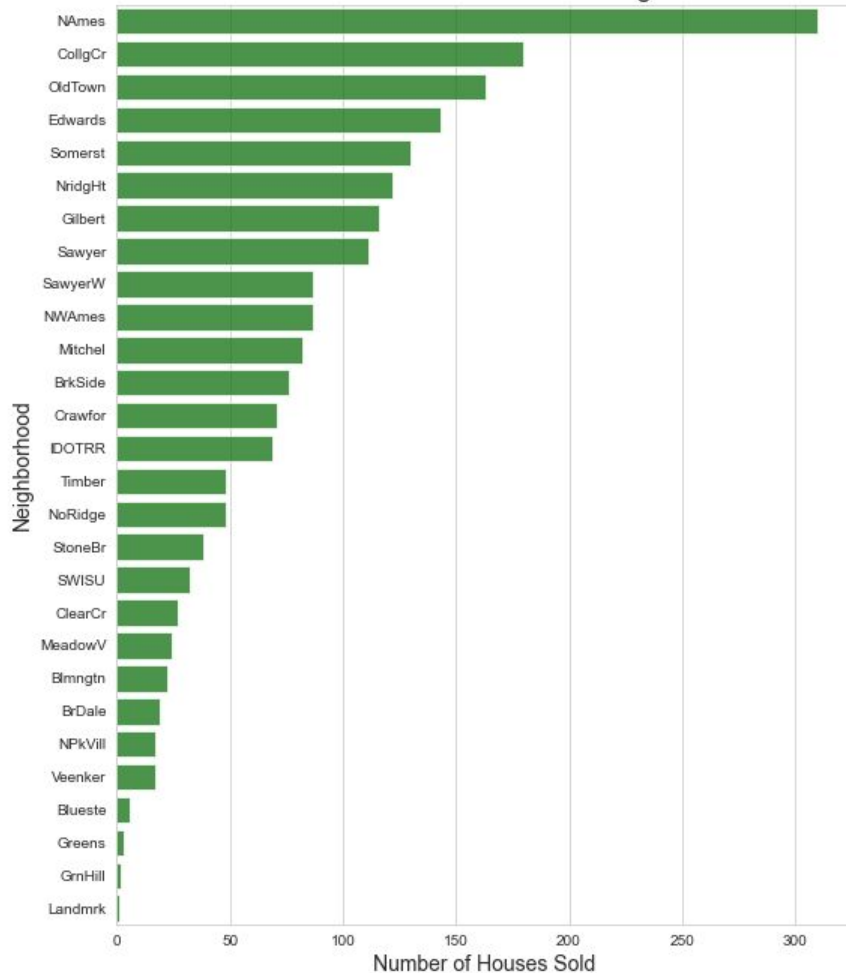
Distribution of Sale Price



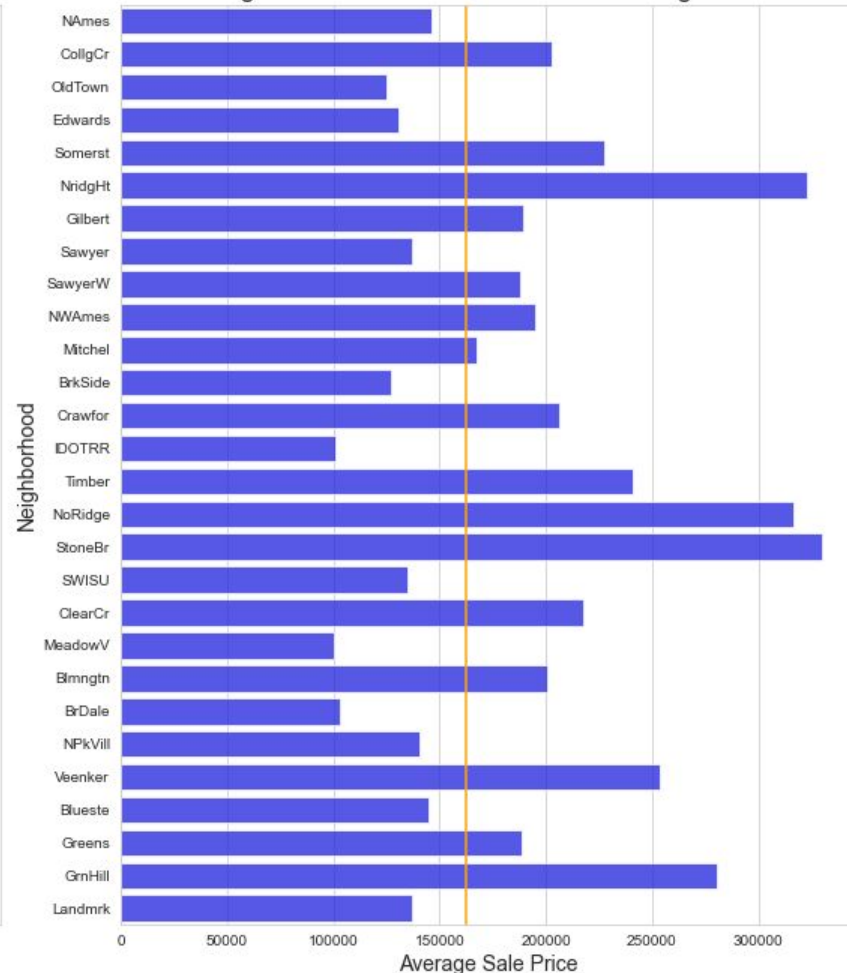
Location, Location, Location

A Closer Look at Neighborhoods

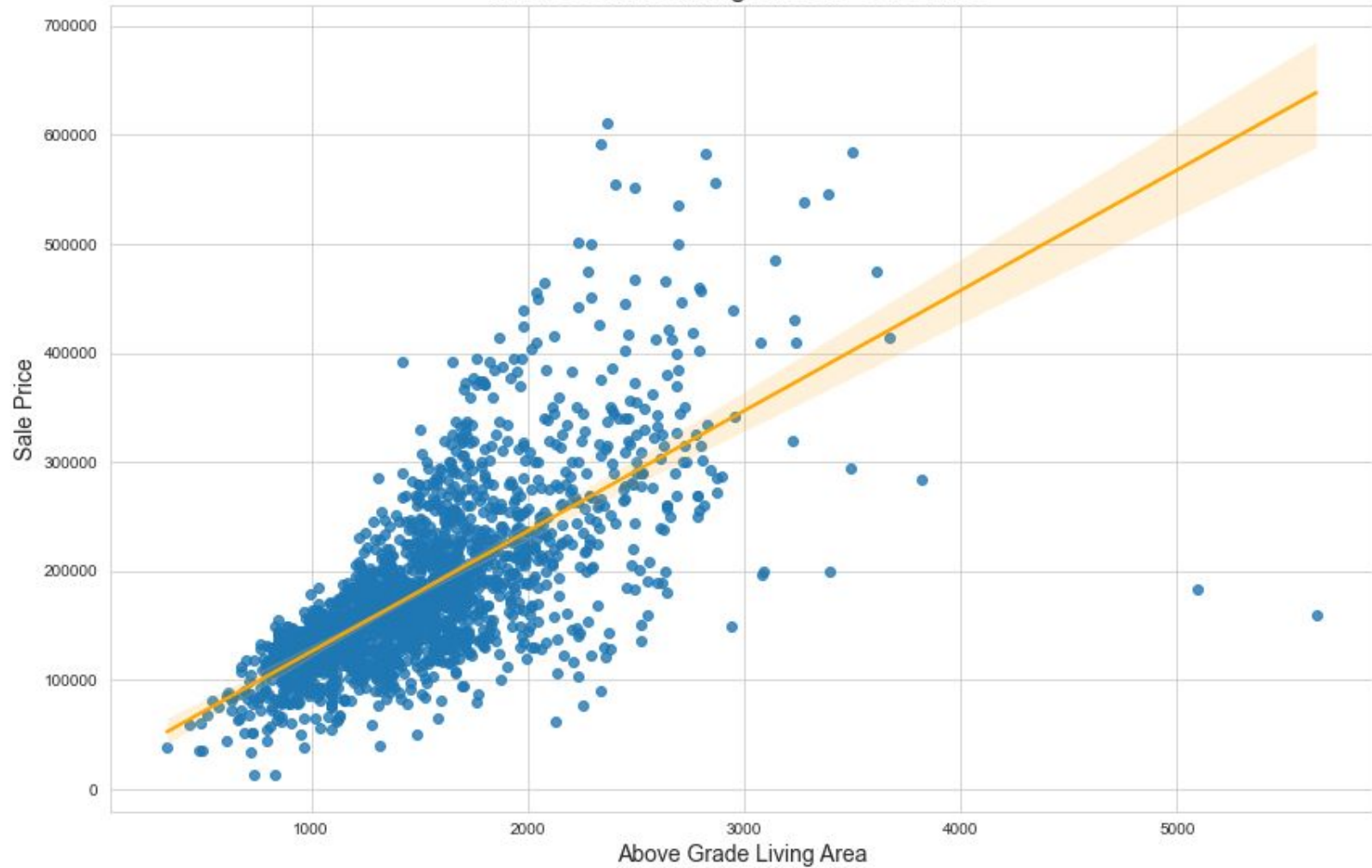
Number of Houses Sold in Each Neighborhood



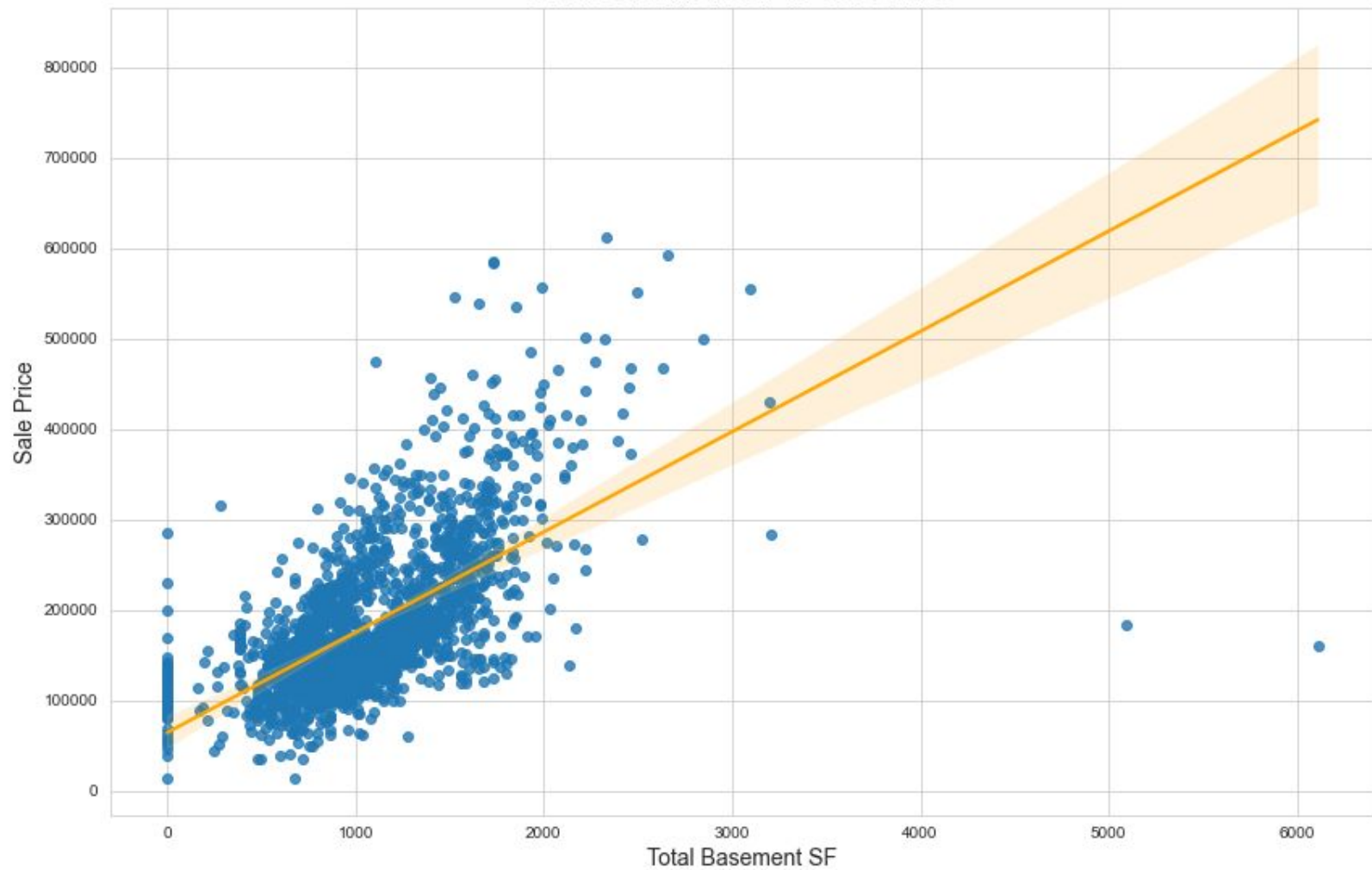
Average Sale Price of Houses in Each Neighborhood



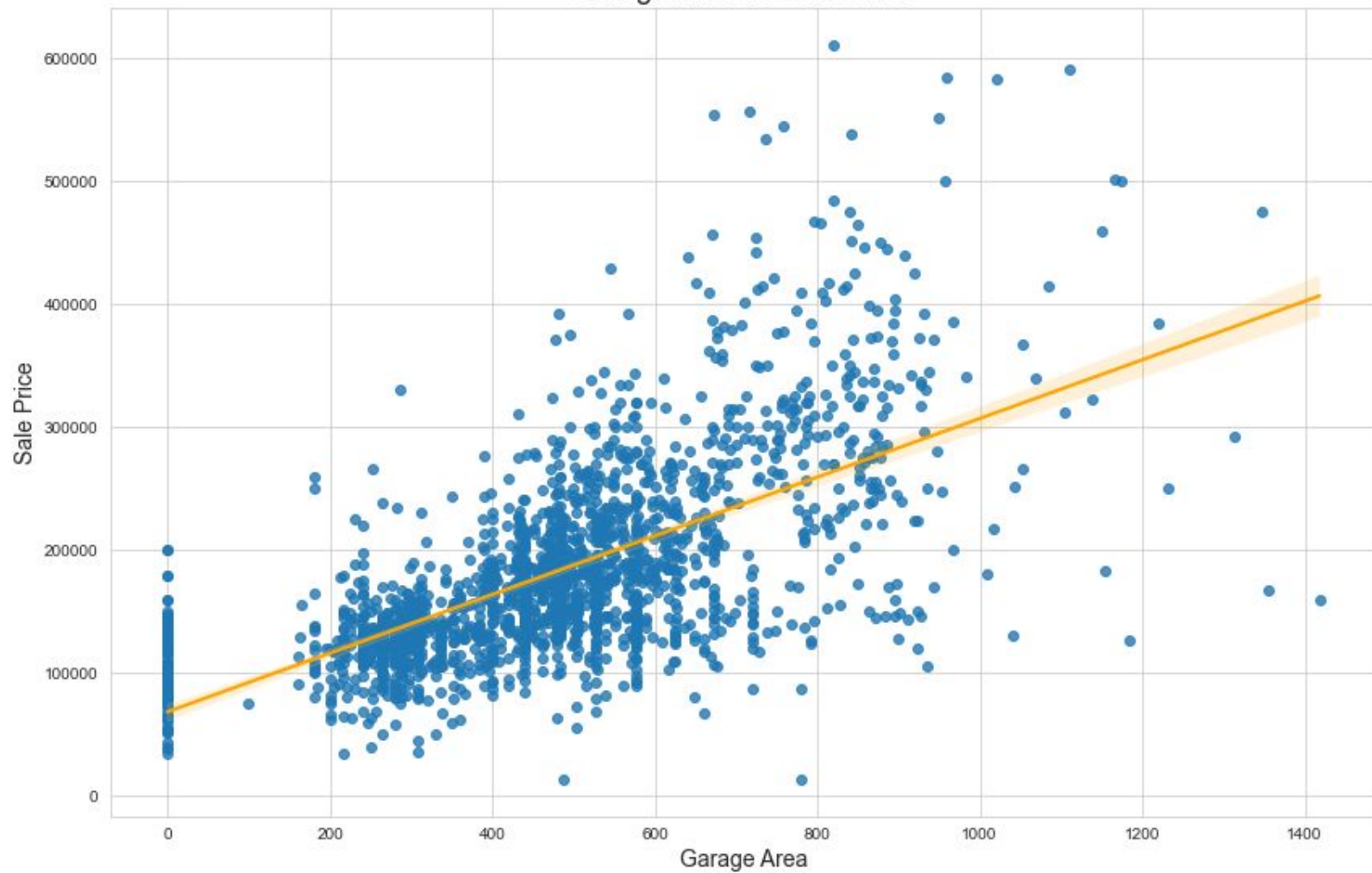
Above Grade Living Area vs Sale Price



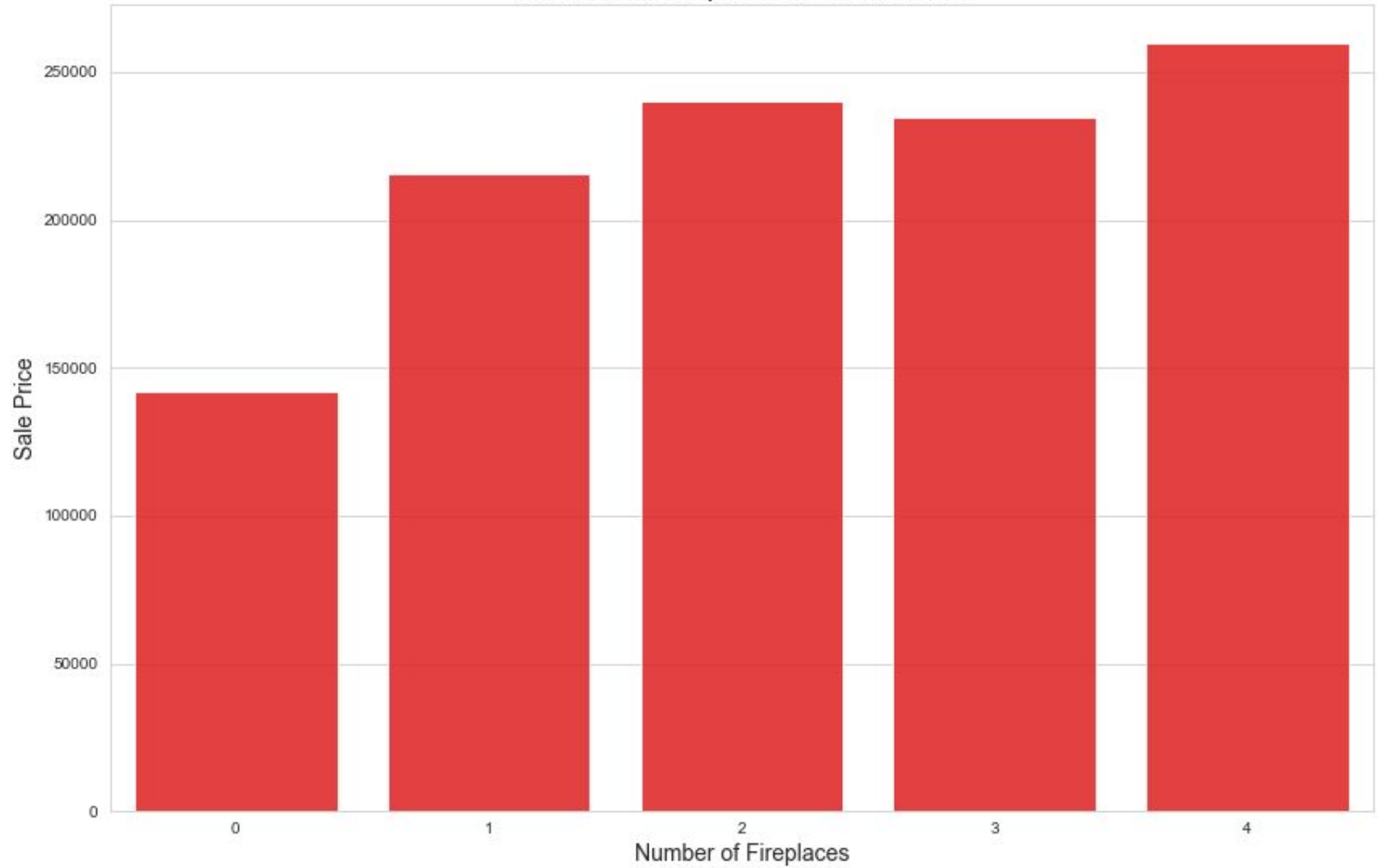
Total Basement SF vs Sale Price



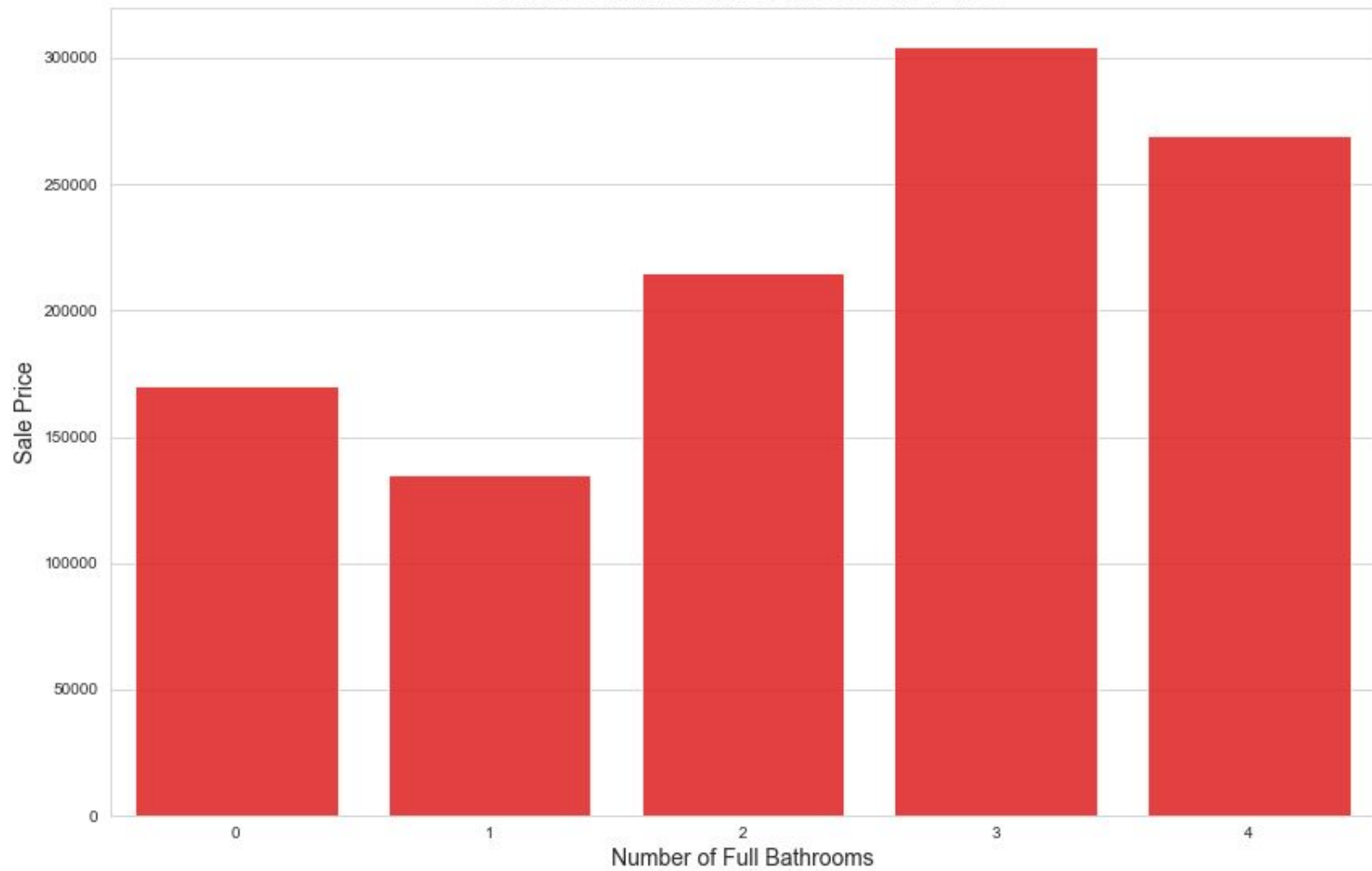
Garage Area vs Sale Price



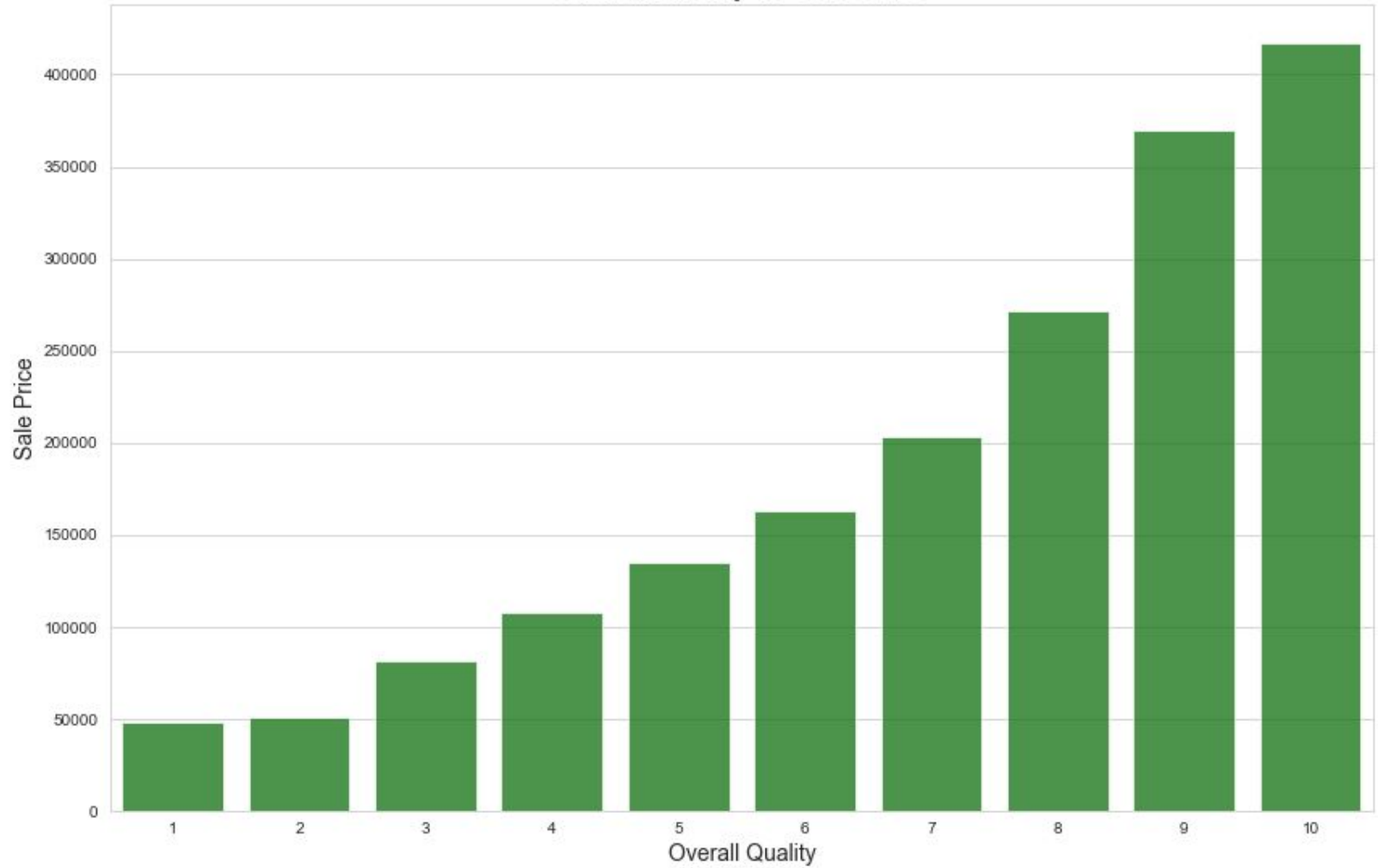
Number of Fireplaces vs Sale Price



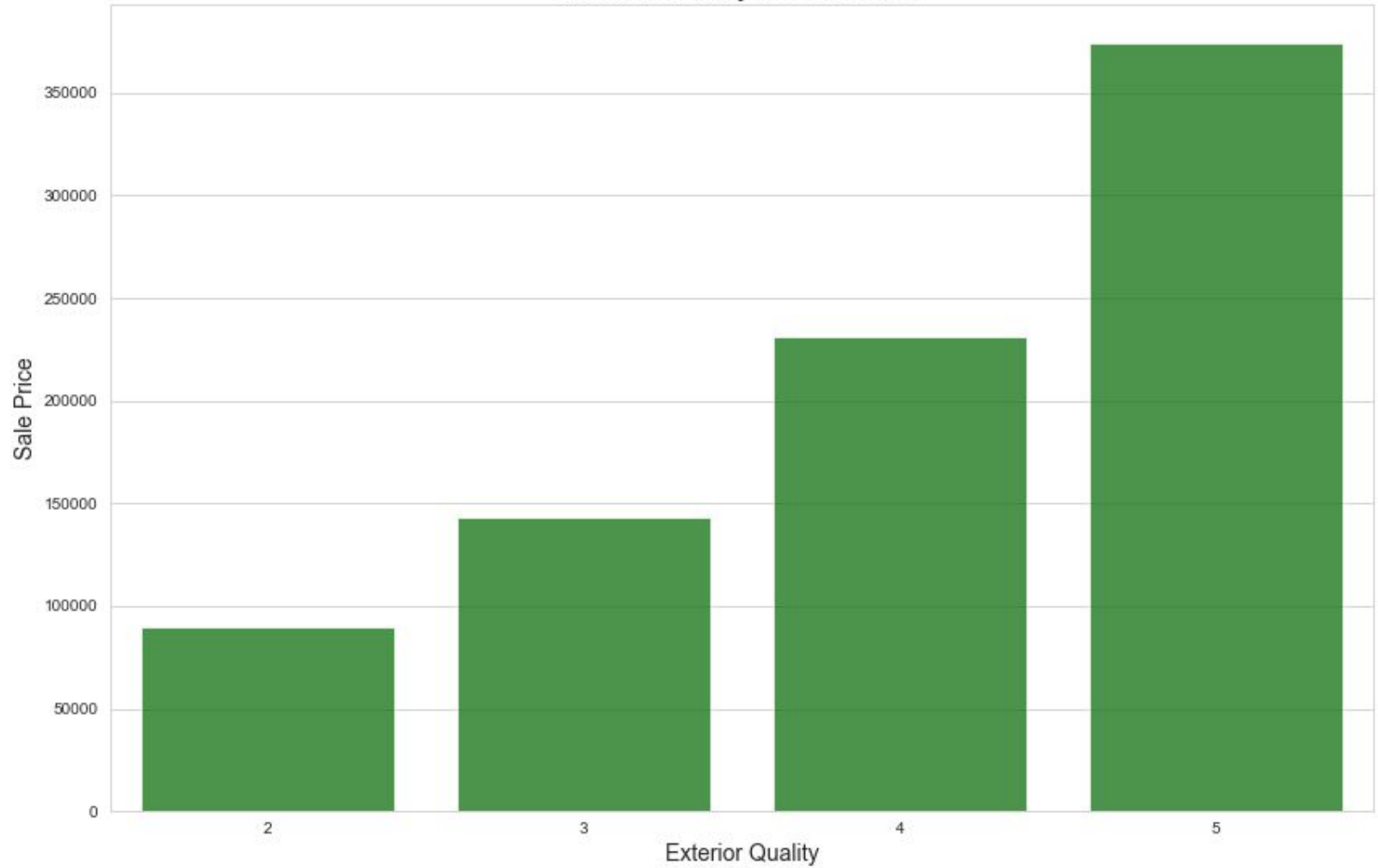
Number of Full Bathrooms vs Sale Price



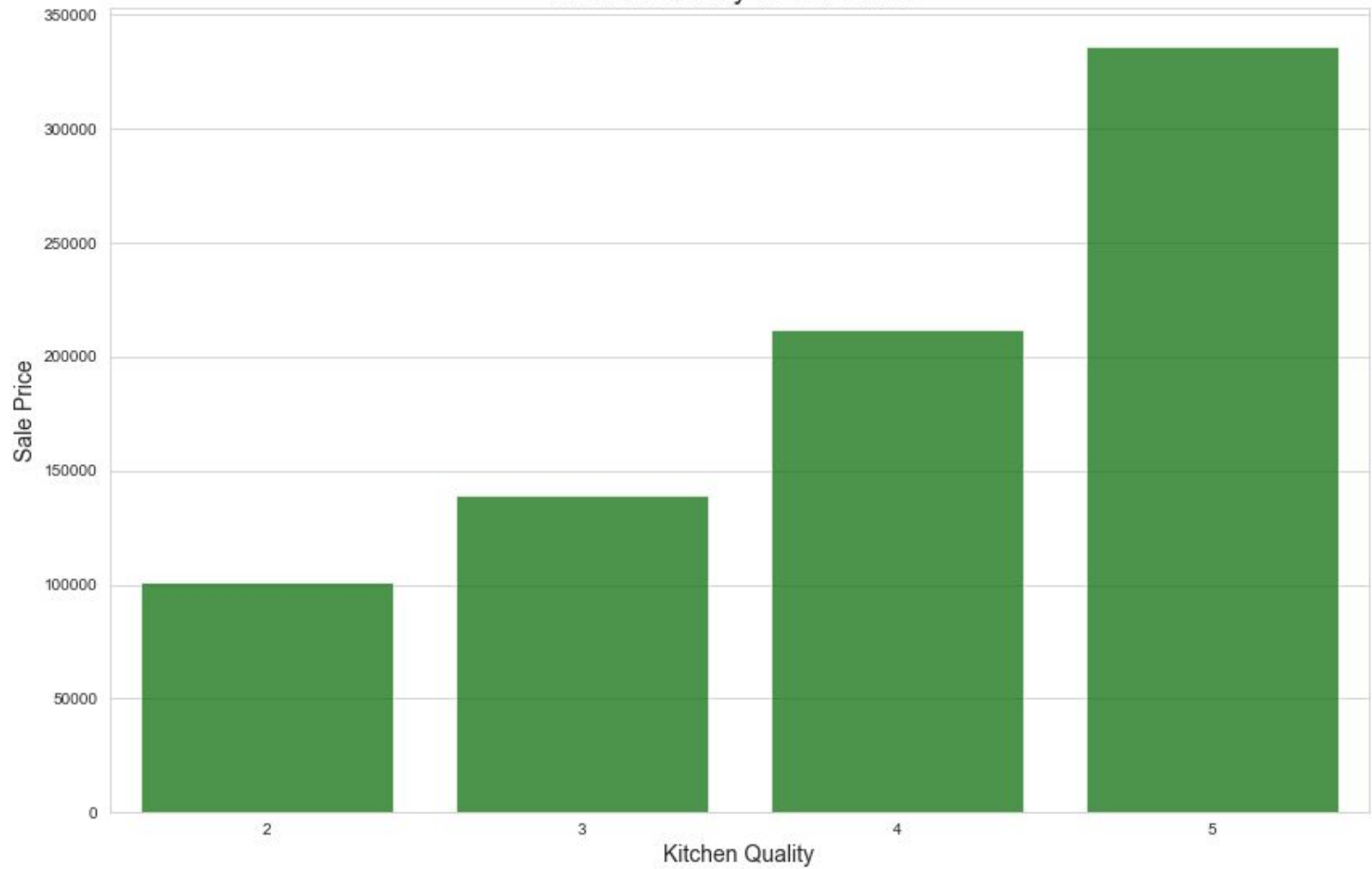
Overall Quality vs Sale Price



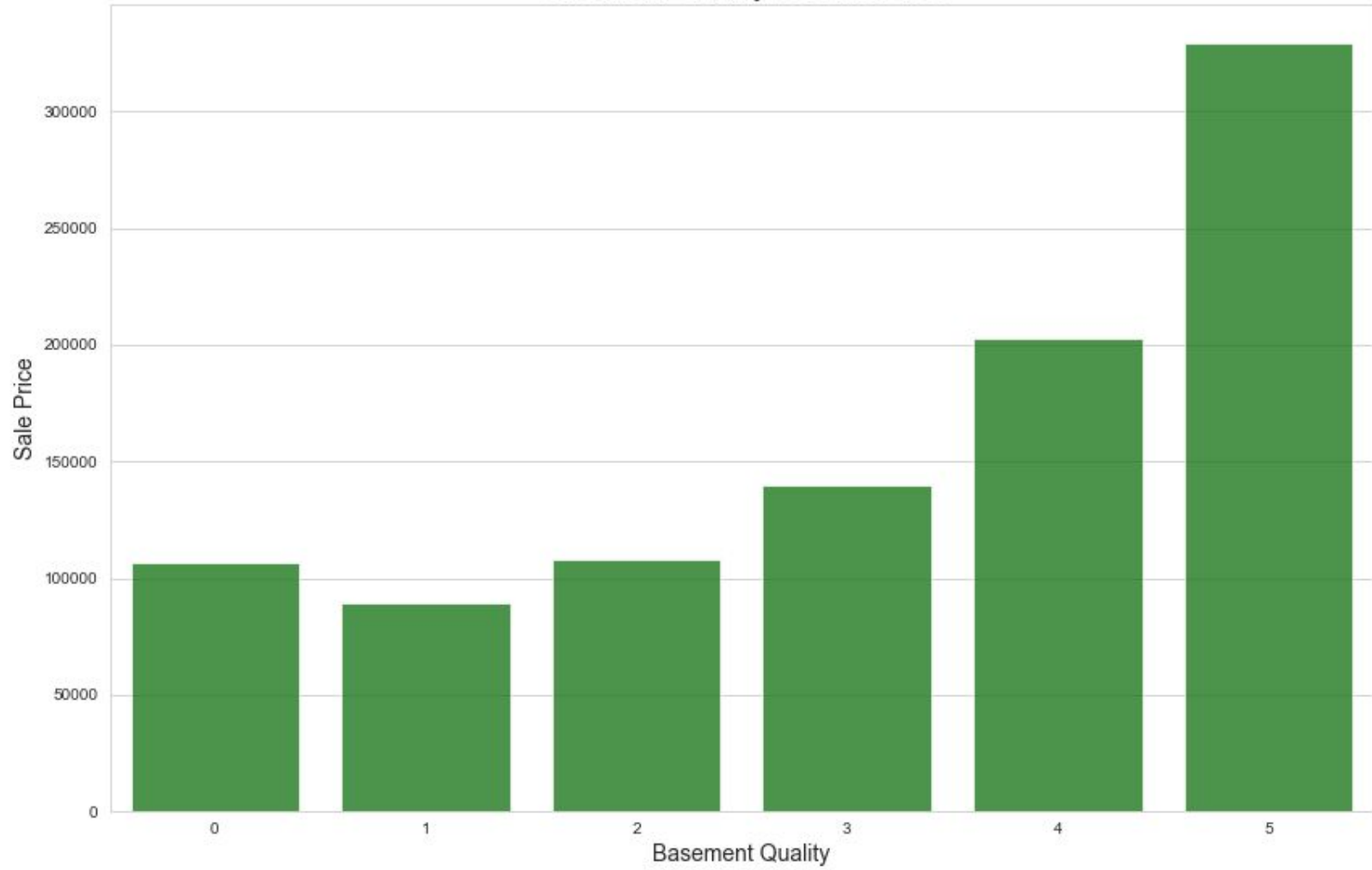
Exterior Quality vs Sale Price



Kitchen Quality vs Sale Price



Basement Quality vs Sale Price



Baseline

Root Mean Squared Error (RMSE)

$$\text{RMSE} = 76,414$$

Results

Model	RMSE
Baseline	76,414
Lasso Regression	24,975
Ridge Regression	24,211

Note: Scores are the average of 50 tests

Features that Increase Home Values the Most

Above Grade Living Area

Garage Area

Overall Quality

Basement Quality

Exterior Quality

Neighborhood

Kitchen Quality

Questions?