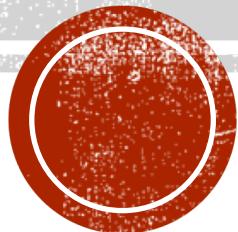


KINGS COUNTY HOUSE MARKET

Analysis and Predictive Model Report by Nadir Sarigul



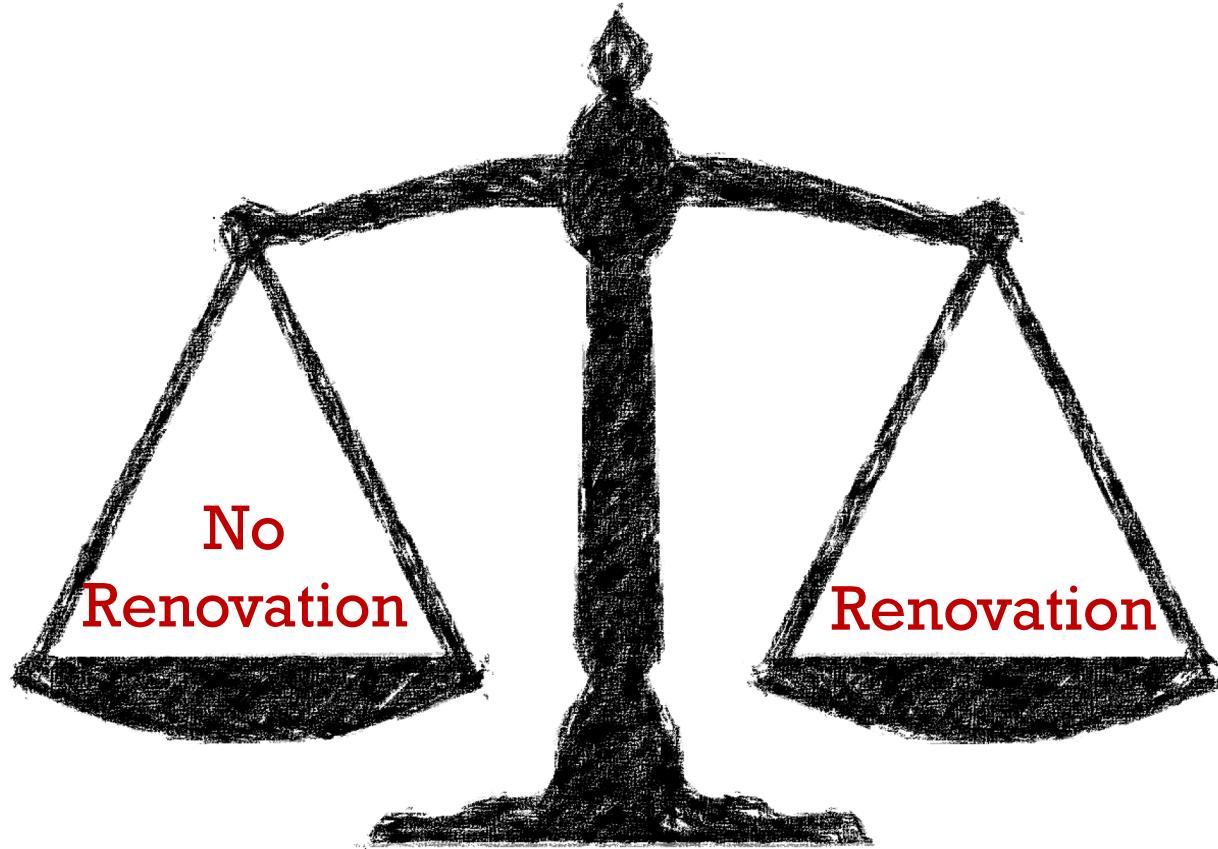
Business Problem

- How to increase the sales value of a home in Seattle?

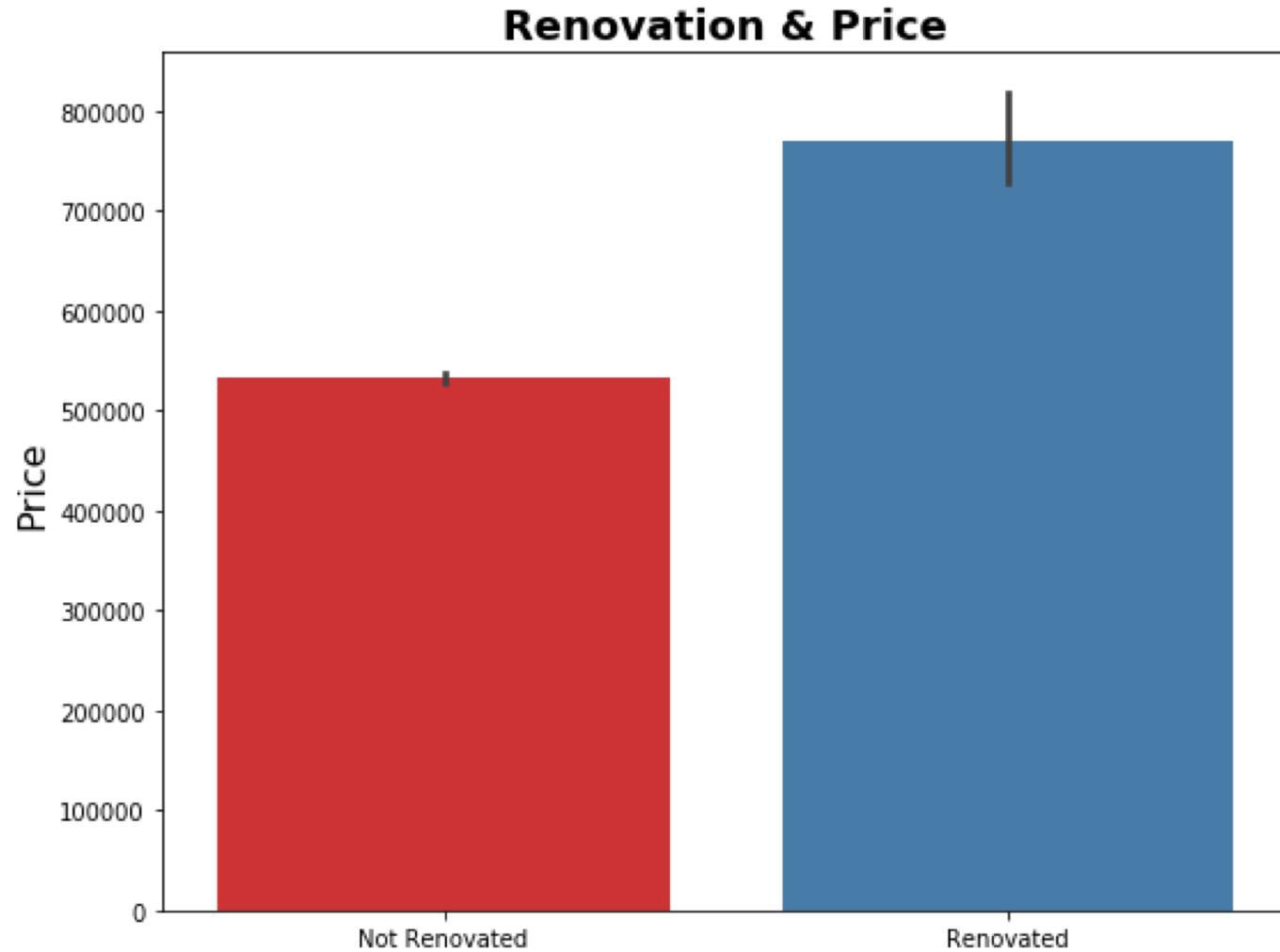


Business Problem

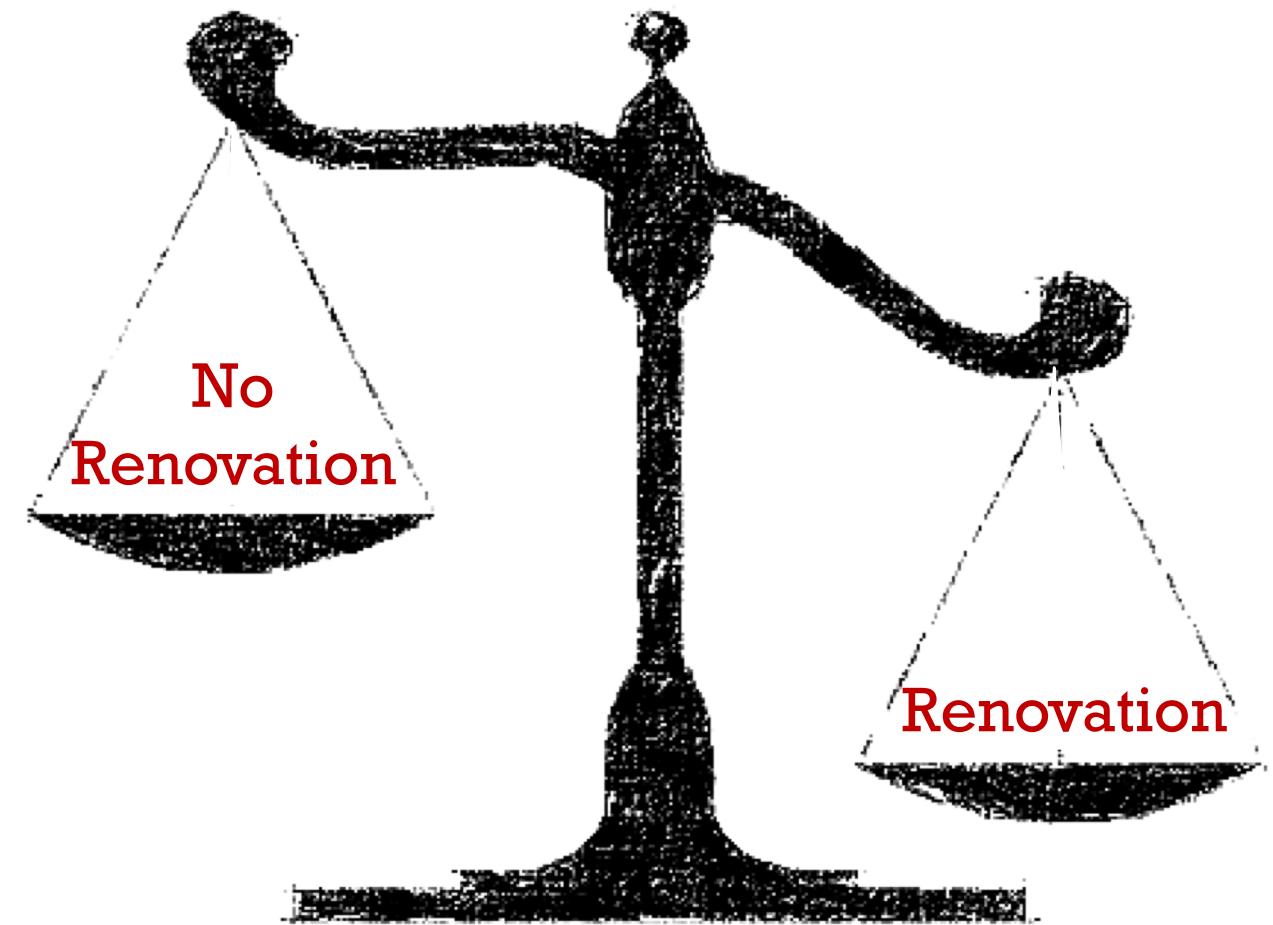
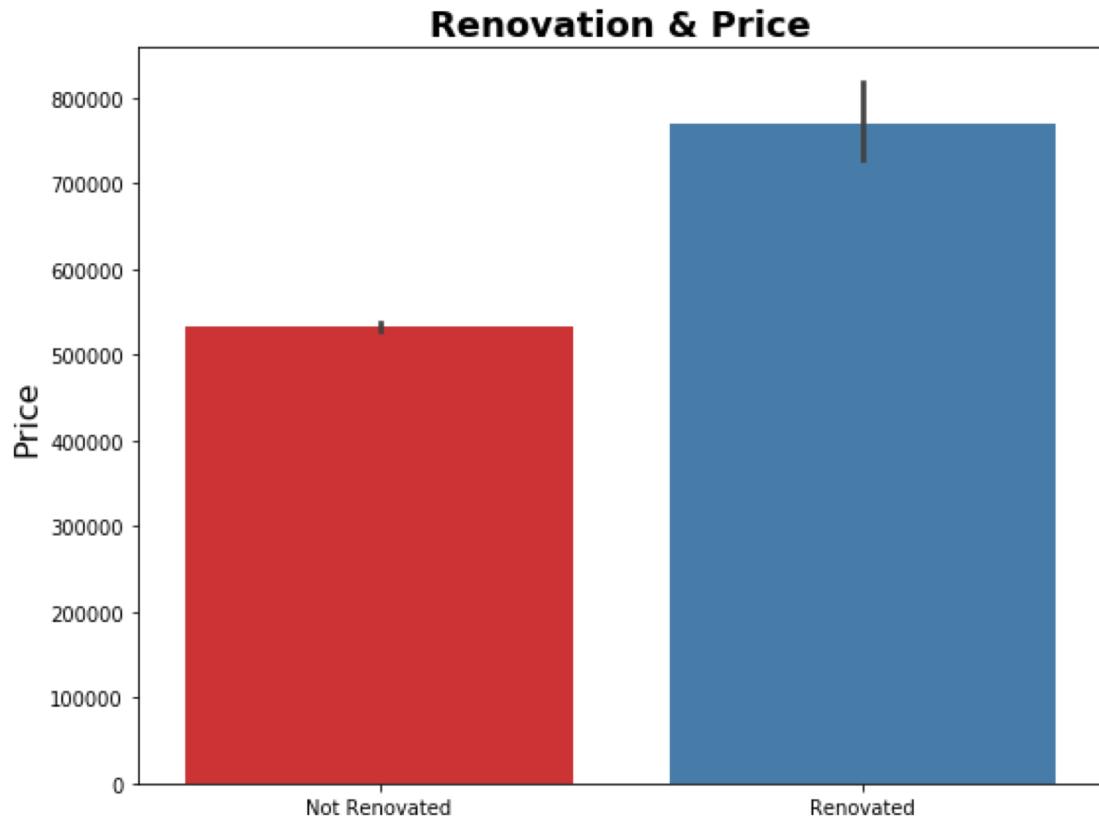
- How to increase the sales value of a home in Seattle?



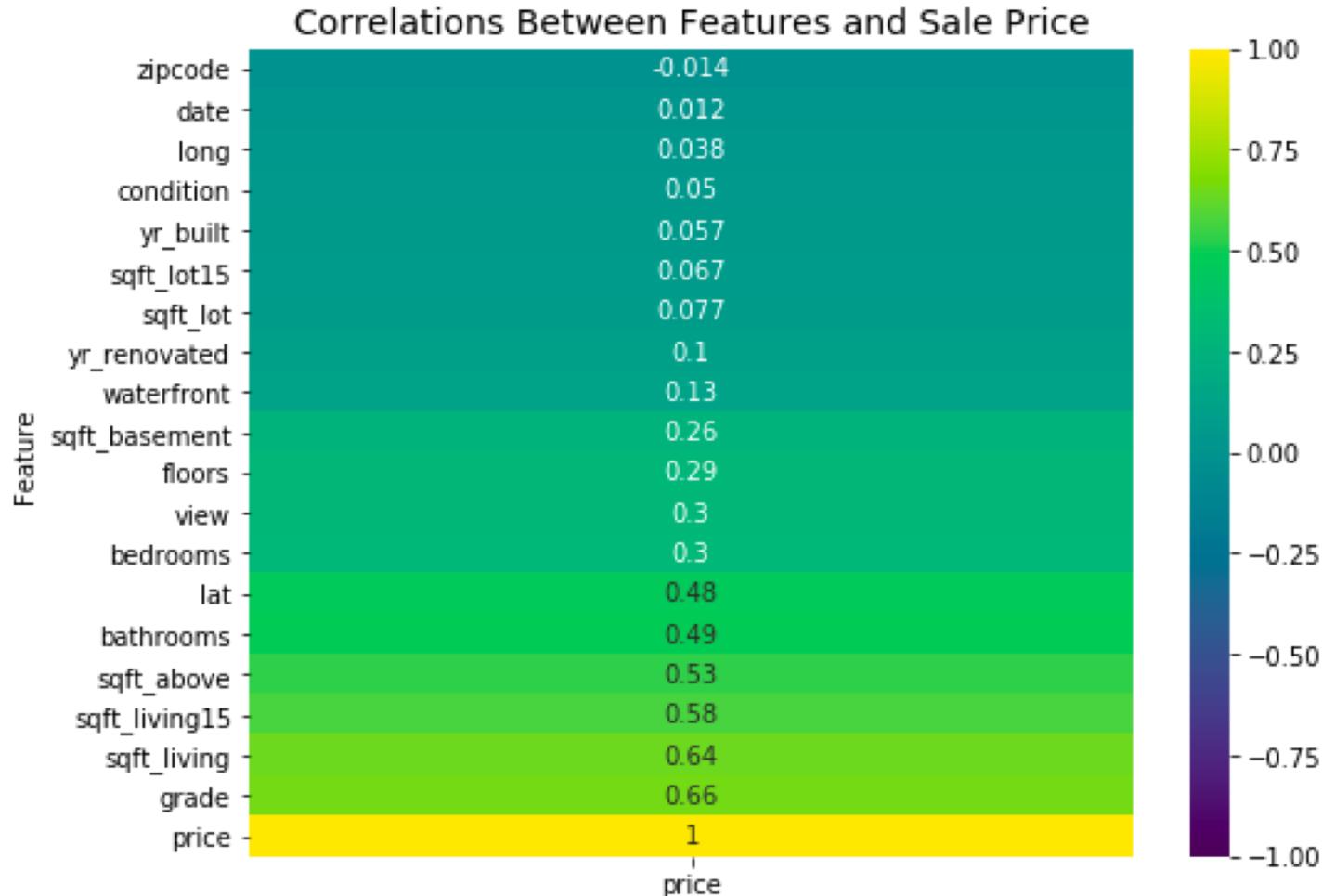
Renovation increases the sales price of homes



Renovation increases the sales price of homes



Size, number of bathrooms and overall grade of the house matter



What should we consider?



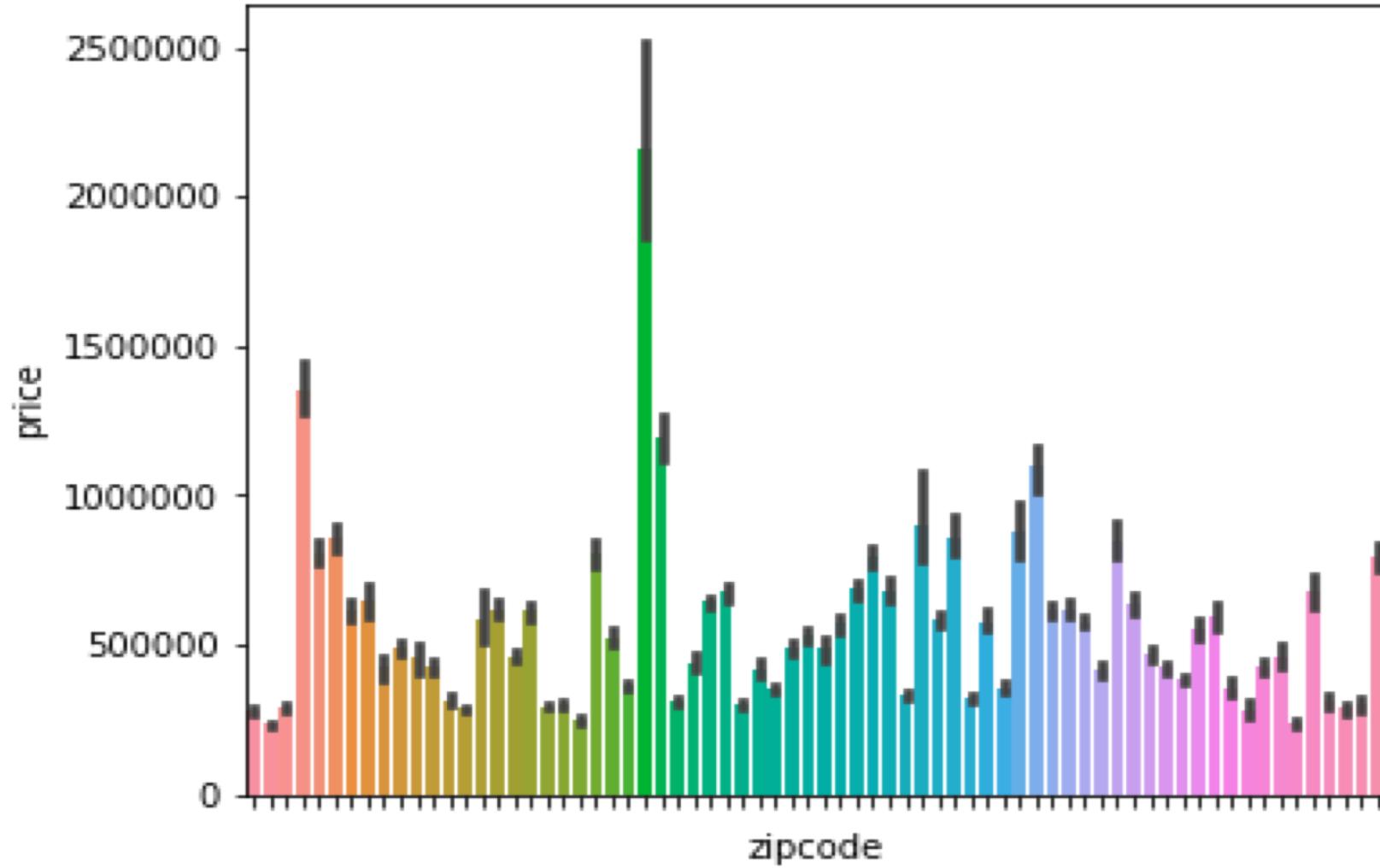
- # bathrooms
- Size of the house/lot
- Condition/grade
- Location
- Neighborhood



Location does not seem to affect much the price of houses in Seattle



But maybe it does...



Making a Predictive Model

What we know

Square footage

Number of bathrooms

Overall condition of the house

Square footage of houses in the neighborhood

Zip code

What we want to know

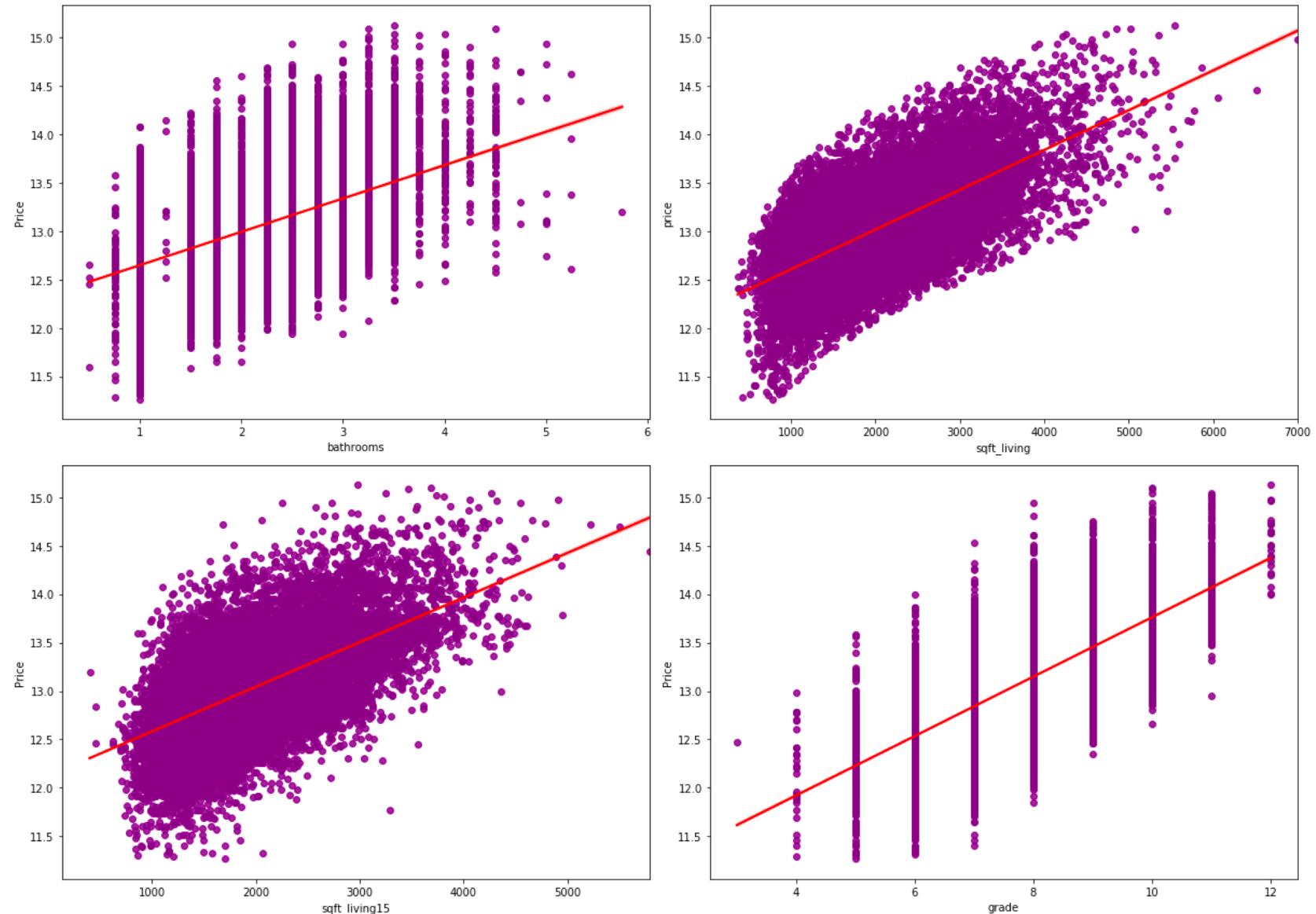
Sales Price

Multiple Linear Regression

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graph LR; A[Input Features] --> B[Multiple Linear Regression]; B --> C[Sales Price]
```

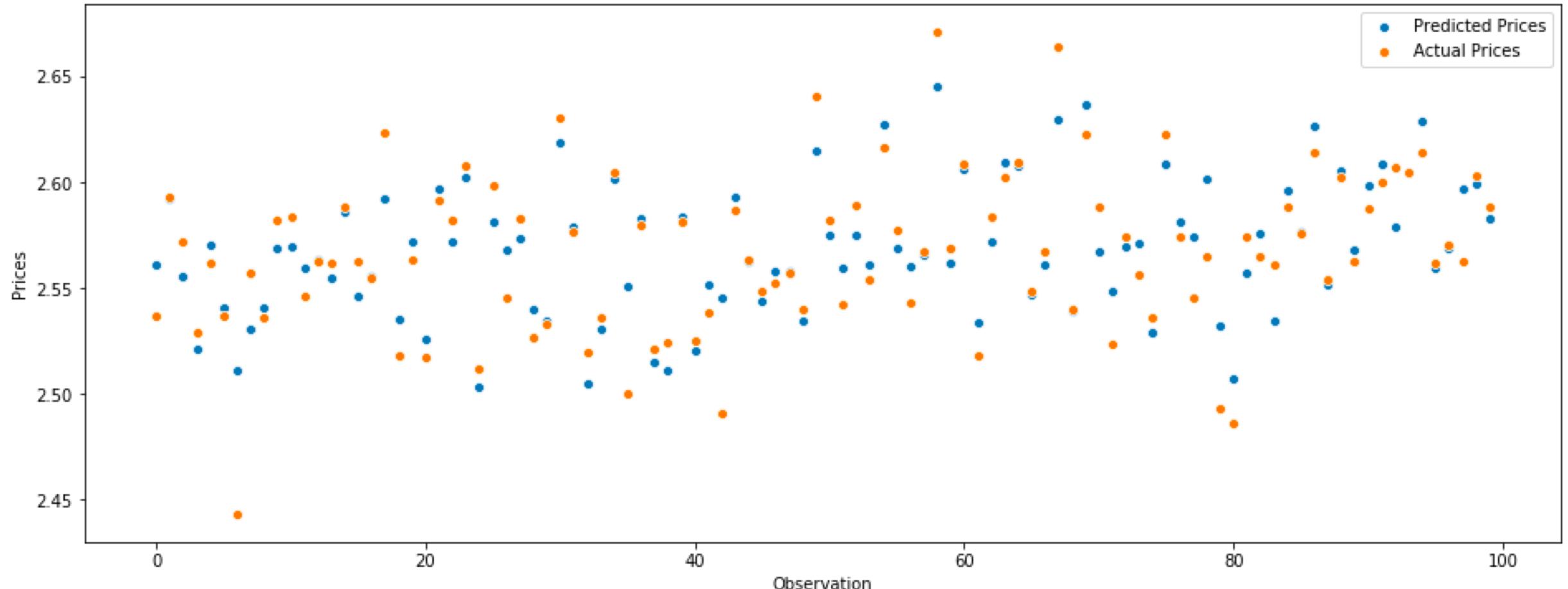
The diagram consists of three main components: a yellow rectangular box on the left labeled 'What we know', a white rectangular box in the center labeled 'Multiple Linear Regression', and a pink rectangular box on the right labeled 'What we want to know'. A large red arrow points from the 'What we know' box to the 'Multiple Linear Regression' box, and another red arrow points from the 'Multiple Linear Regression' box to the 'What we want to know' box.

Size, number of bathrooms and overall grade of the house matter



But does it actually work?

Comparing predicted price vs actual price



Mean squared error train = 1.23e-09
Mean squared error test = 1.11e-08

R squared train = 0.81
R squared test = 0.82



Conclusions

- ▶ Doing renovations on a house leads to higher sales prices
Focus on: bathrooms, increase square footage and general condition
- ▶ Location and the size of houses in neighborhood also affect the price, but cannot be changed



Thank you!

Any
Questions

