King County Real Estate
A Look into Home Improvements

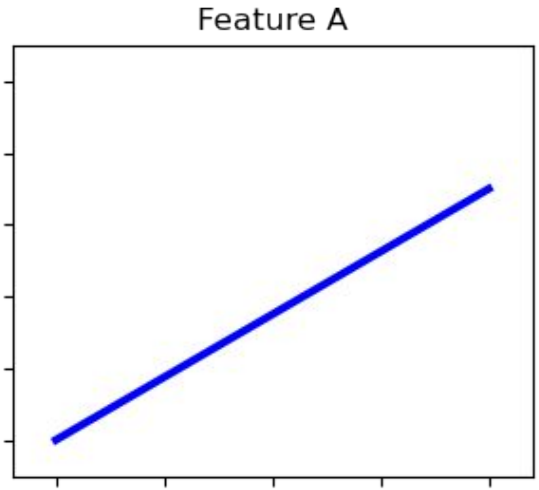
Prepared by Carl Schneck

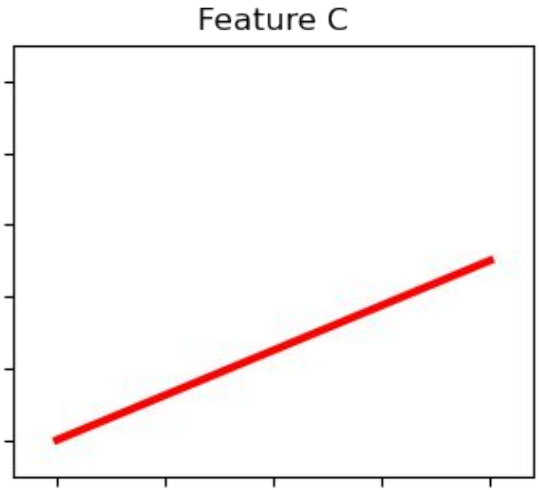
Outline

- Introduction to Business Problem
- Dataset
- Method
- Model
- Conclusion
- Future Improvements

Business Problem

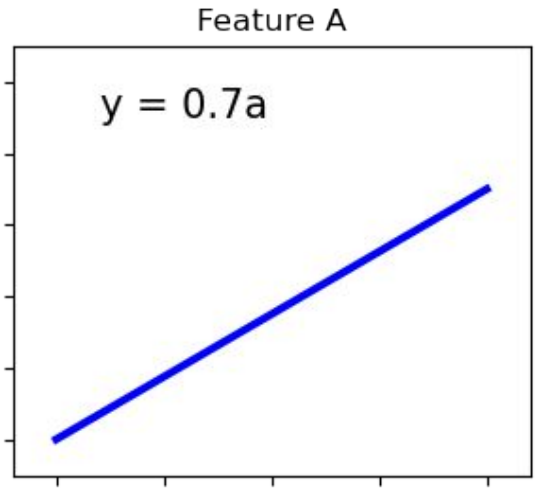
- Many features to take into consideration
- Efficient investments equal greater rewards

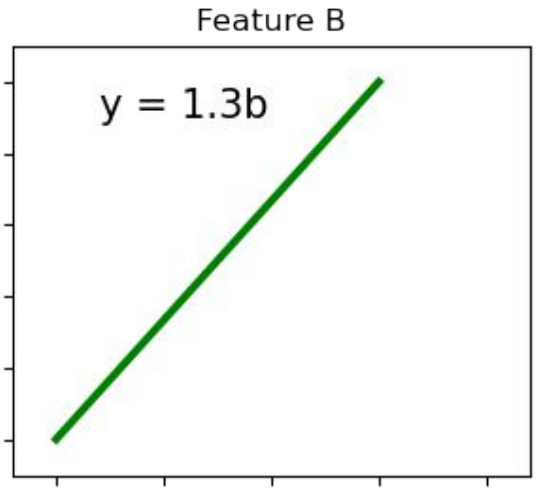


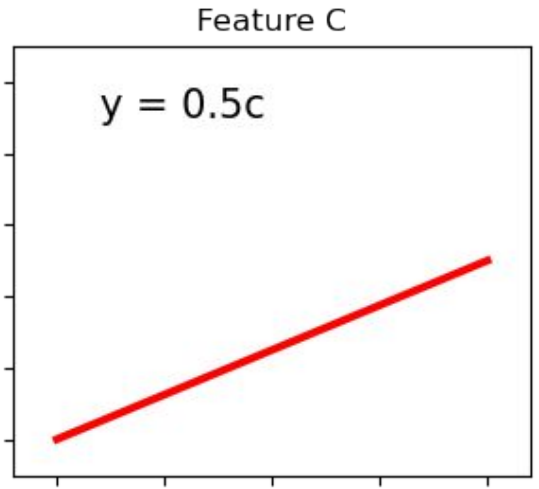


Goals

- Find the best features
- Supply quantitative measures.







Dataset

- King County Home Sales Data
- Years: 2014-2015
- 70 Zipcodes
- 21,500 entries
- Prices:
  - Mean: $538,000
  - Span: $78,000 - $4,000,000
- Features:
  - Location
  - Quality
  - Size

Method

Linear Regression Model

- Simple and Understandable
- Coefficients with direct correlation to target

Features

- Modifiable features
  - Home size
  - Rooms
  - Quality

Model

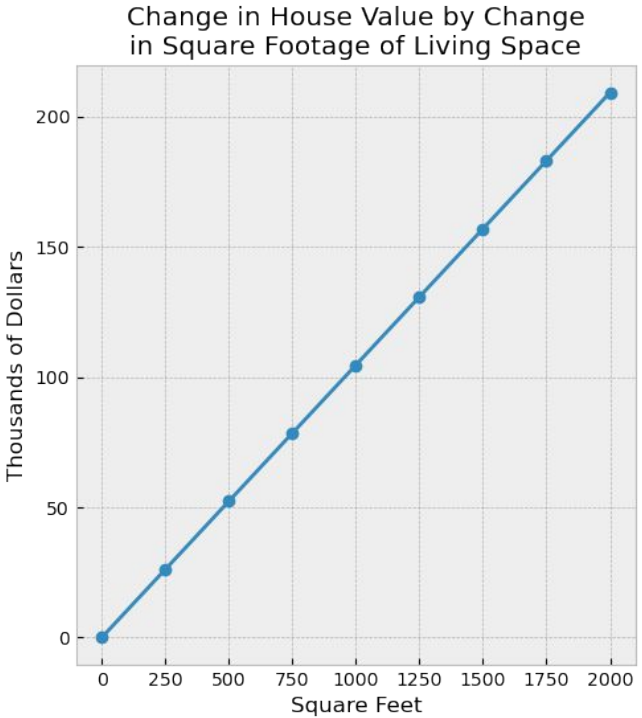
Three Features:

- Square Footage of living space
- Grade - Overall construction and design
- Condition - Overall maintenance condition

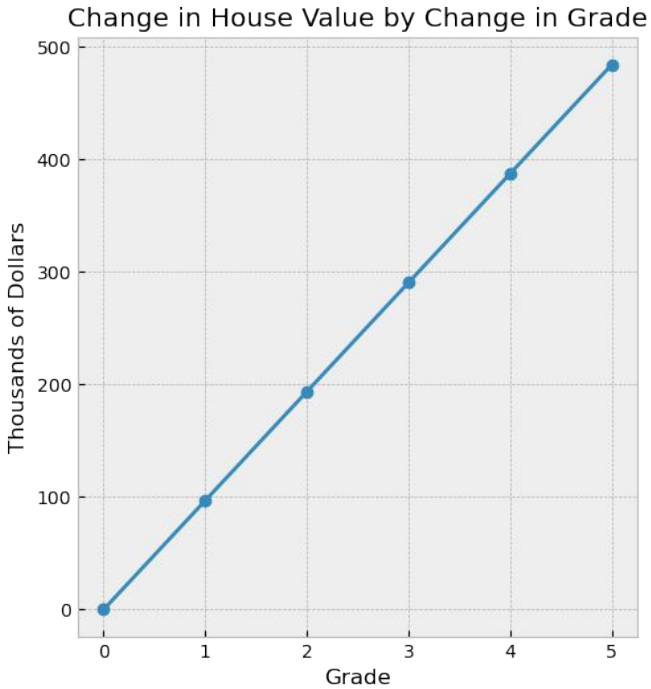
Performance

- Only Viable for homes under $1,500,000
- Root Mean Squared Percent Error: %41

Model – Top Features



$104.63 Per Square Foot

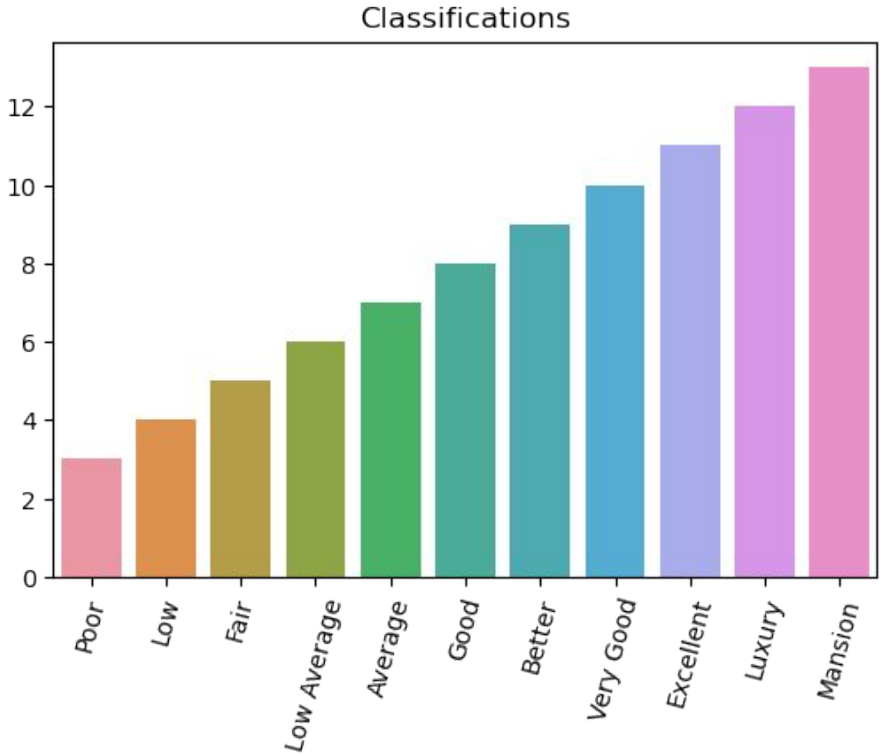


$96,872 Per Grade

Model – Grade

Grade - Overall construction and design

Classification - Scale from 3 to 13 or Poor to Mansion



Conclusion

Square Footage of Living Space:

- $104.63 Per added Square Foot

Grade:

- $96,872 Per Increase in grade

Future Improvements

- Include More Features
- Try more complicated feature transformations
- Acquire more features
  - Ex. Square Footage of Bedroom

The End.

Any Questions?

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