



# Home Renovation Analysis

Michael Tsypin



# Overview

An analysis of King County House Sales dataset determining how different home improvements affects profitability when selling a home.

# Outline

- Business Problem
- Data and Process Steps
- Results
- Conclusions

# Business Problem

- Homeowners and real estate agents are looking for ways in how different renovations affect their home's price and by how much
- Find the renovations that result in the greatest increase on home's price

# Data and Process Steps

- Utilizing multiple linear regressions to determine best renovations for homes

# Results

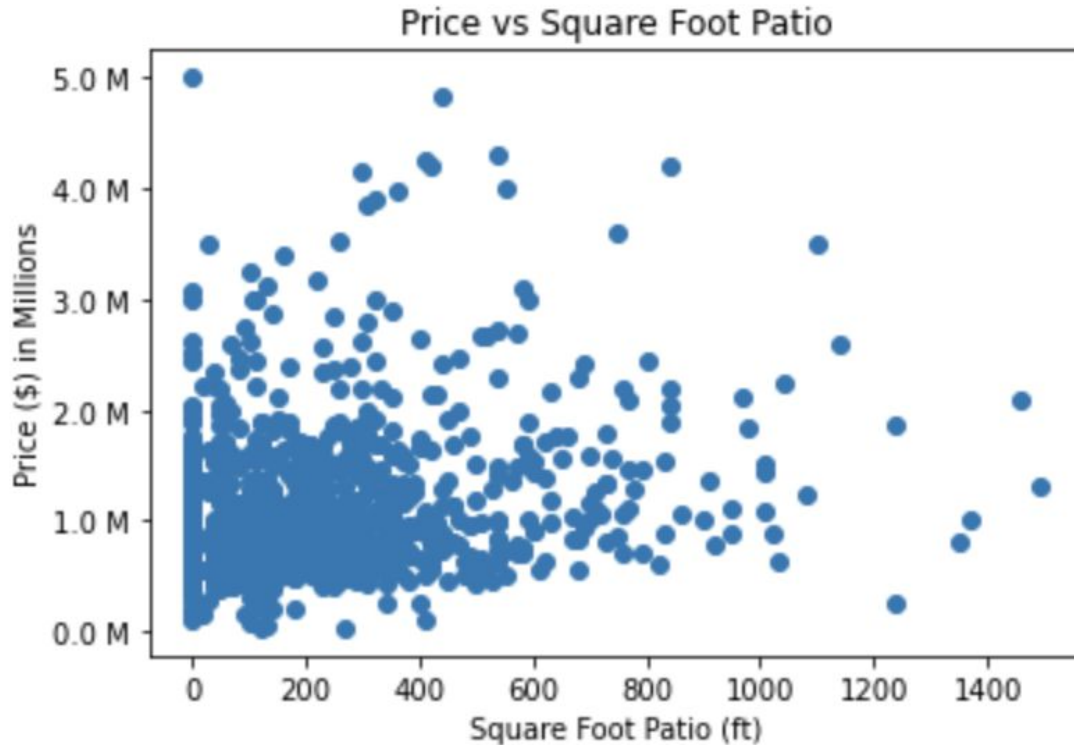
- 42% variance in price
- Results statistically significant

# Results



- For every increase in 1 square footage of the living area, expect an associated increase of \$478 in price

# Results



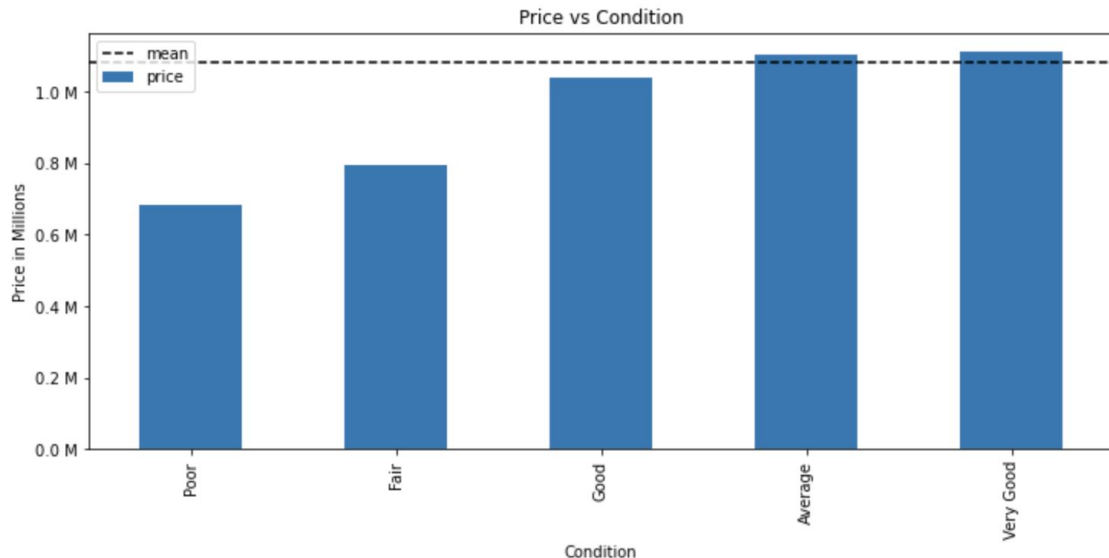
- For every increase in 1 square footage of the patio, expect an associated increase of \$199 in price



# Results

- Root Mean Absolute Error of 604
  - Expected error between true value and model value

# Results



- The Very Good condition will result in the largest increase in price by 32%

# Conclusion

- Improve the overall condition of the house to add the most value when selling a home
- Add square footage to the patio and living area to also help increase the value of the home

# Thank you!

Questions?

Email: [mtsypin9@yahoo.com](mailto:mtsypin9@yahoo.com)