

An aerial photograph of a city skyline at sunset. The sky is filled with warm, orange and yellow clouds, and the sun is low on the horizon, casting a golden glow over the city. In the foreground, there are several tall, modern skyscrapers with glass facades that reflect the sunset light. Below the skyscrapers, there is a dense area of older, multi-story buildings with varied architectural styles. The overall scene is a mix of modern and traditional urban architecture.

KING COUNTY HOUSING RENOVATION ANALYSIS

HOW SHOULD I ADVISE MY CLIENTS?

GENERAL BUSINESS PROBLEM

A client comes to you seeking to sell their home in the near future, and wants advice.

How should you advise them on whether it is worth renovating their home to improve its condition or add features prior to the final sale?



QUESTIONS ADDRESSED

- How much would renovating a home to improve the condition or grade of the home likely increase the sale price?
- How much would adding an extension to the living area of a home likely increase sale price?
- How much would adding specific features such as an additional bathroom likely increase sale price?

DATA AND METHOD

- Data on King County house sales from 2014 – 2015 was used
- A multiple linear regression model was constructed using variables including:
 - Neighborhood
 - Numbers of bedrooms, bathrooms, and floors
 - Square footage of the living space
 - Home grade
 - Evaluation of home condition
 - Time of renovation

THE MODEL

- The model has an R-squared of 0.85

PREDICTIONS ON RENOVATION



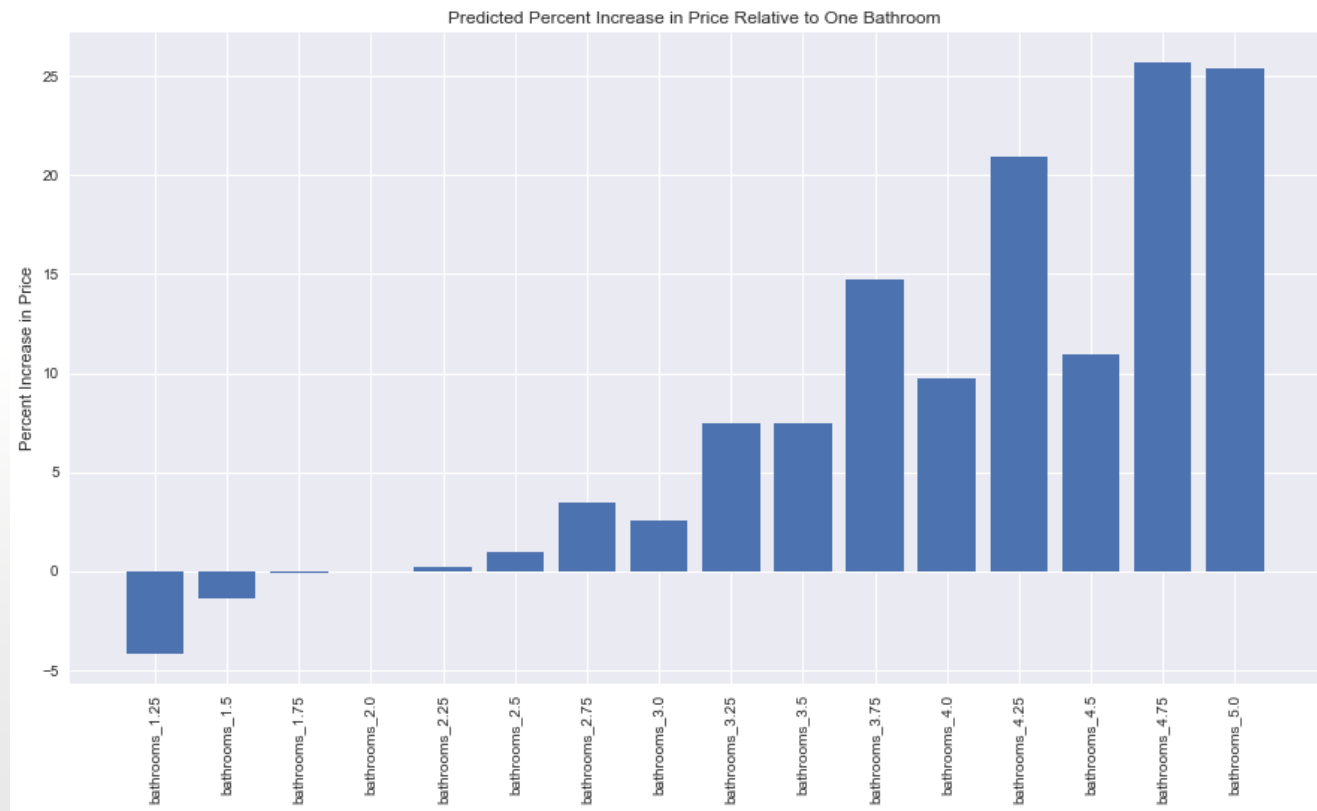
PREDICTIONS ON HOME CONDITION



PREDICTIONS ON HOME GRADE



PREDICTIONS ON NUMBER OF BATHROOMS



PREDICTIONS ON LIVING SPACE



ADDITION USE OF MODEL



CLIENT RECOMMENDATIONS

- Increasing the grade score of a home by one level will increase the home value by around 10% for grades less than 8 and by about 20% for higher grades.
- Renovating an unrenovated home will typically increase its price around 14%, but only by around 2% if it has been previously renovated.
- Increasing the square footage of the home will increase the home price by about 0.44% per 1% of added space.
- Adding an additional bathroom may increase the price by around 5% but is highly dependent on context.

NEXT STEPS

- Analyze data on contractor prices, to give clients more definitive advice on the potential net gains of renovations.
- Seek out data sets that include more specific data on narrow home features, like particular kitchen features.
- Seek out data sets that cover more years to enable comparisons between sales on identical homes undergoing renovation to address concerns about causation.