

House Price Dependency

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Summary

This project uses an iterative approach to Regression Modelling in order to understand the top 3 architectural features of houses in King County that are correlated with its selling price.

1. Grade
2. Basement
3. Sqft Living Space



Outline

- ❑ Business Problem
- ❑ The Data
- ❑ Methods
- ❑ Results
- ❑ Conclusions



Business Problem

- ❑ Understand constructions tendencies for the new North American buying market.
- ❑ Ensure profits of this initial subdivision project are achievable which may warrant similar opportunities provided within the U.S.
- ❑ Establish a model that can be used for similar data sets.



The Data

The data provided for this project involves the selling price and characteristics of homes that were sold in King County.

- ❑ Over 21,500 individual homes
- ❑ Architectural features, such as number of floors, bedrooms and bathrooms
- ❑ House sales occurred between 2014 and 2015



Methods

Through various visualisations and Linear Regression analysis, the model went through five total iterations. These versions tackled issues such as:

- ❑ Identifying categorical data
- ❑ Dropping variables that showed multicollinearity
- ❑ Transforming data to tackle skewness



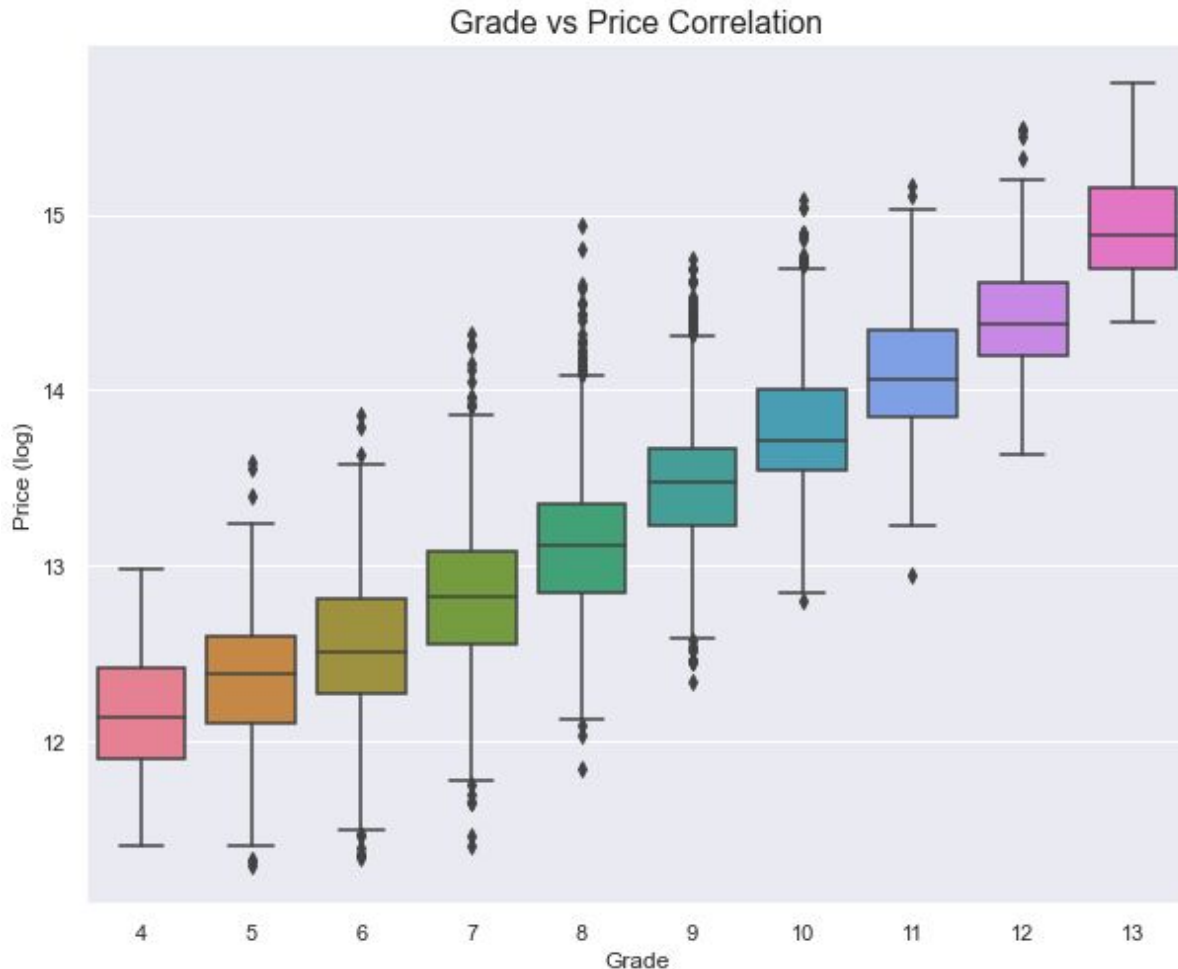
Results

Out of all the architectural variables in play, the regression analysis determined that the top 3 that were most highly correlated with the house selling price were:

1) Grade

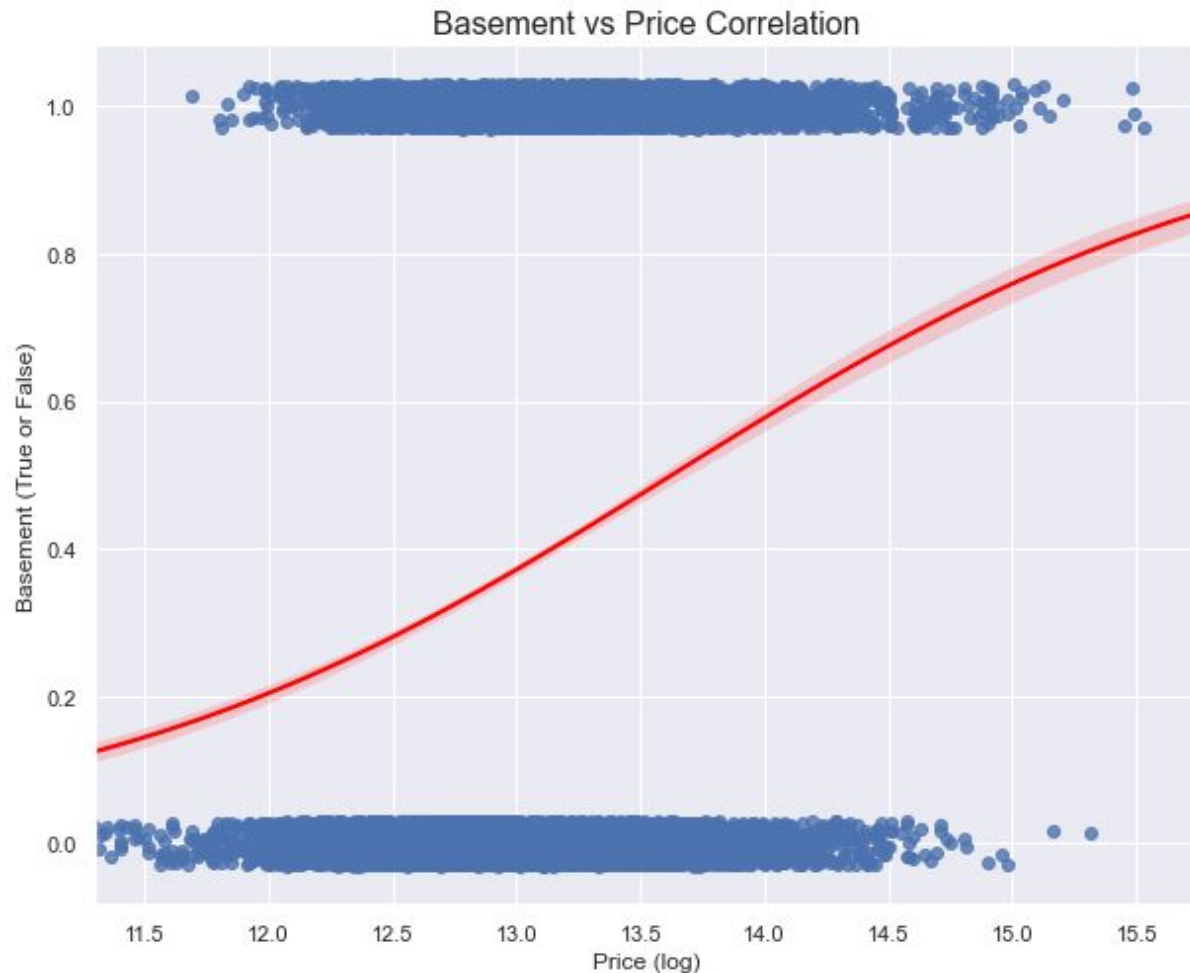
The better construction materials, and more complex/well-planned architecture of the house, the higher the price the house will sell for.

Approximately for every grade level attained, the house price will increase by roughly \$104,000 USD.



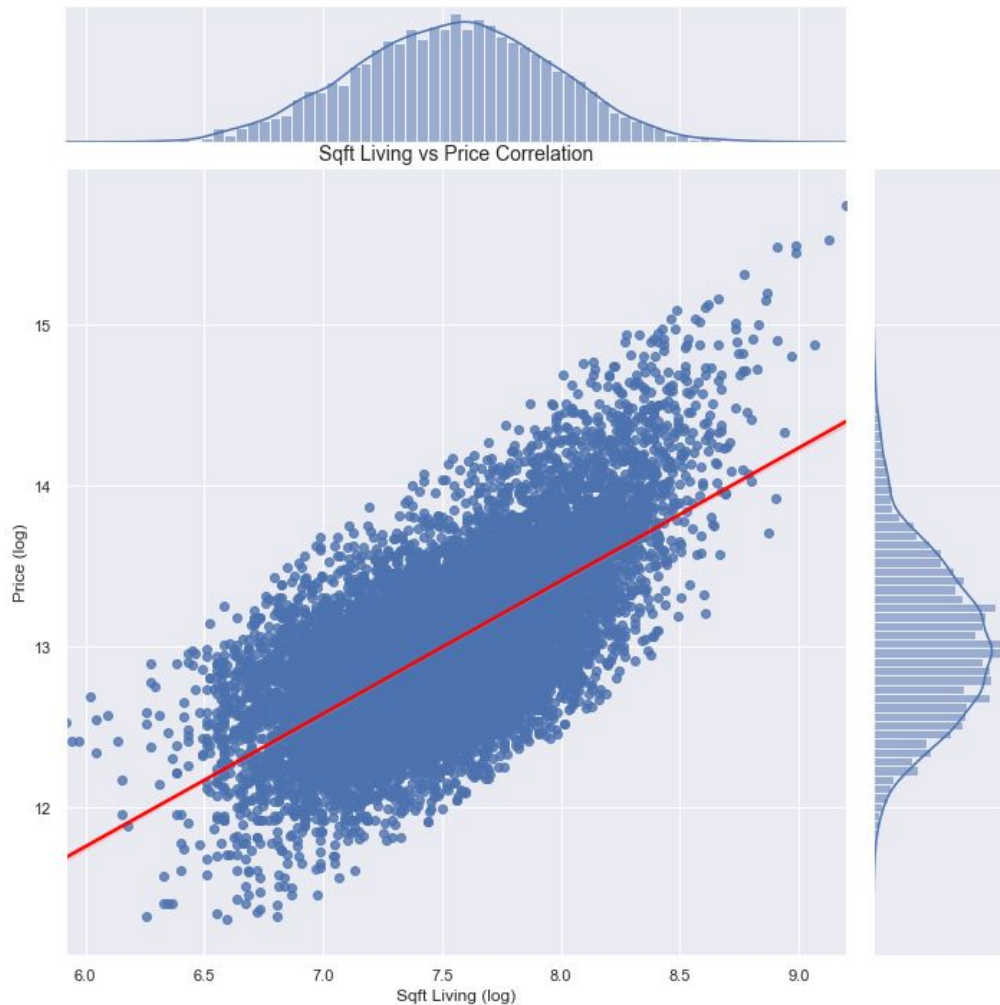
2) Basement

If the house is built with a basement, the house price will approximately increase by roughly \$ 61,000 USD.



2) Sqft Living Space

Approximately for every 1 sqft of living space added, the house price will increase by \$ 165 USD.



Conclusions

- ❑ Metricon Homes should try to ensure the home is granted a high grade by the King County Council.
- ❑ The houses should be built with a basement.
- ❑ The houses should have a large square footage of living space.

Next Steps:

- ❑ Analysis of location data can be utilised to find which areas to build in.
- ❑ Investigate Median Income trends.
- ❑ Gather housing data on other potential Counties

Thank you!

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