Maple Homes Real Estate King County

Achieving Success in Expanding Maple Homes Real Estate to King County, Washington

Summary

- Maple Homes is entering King County
- Maple Homes hired FurPig Industries to provide recommendations for the sales team
- FurPig modeled the data using multi linear regression
- FurPig makes the following recommendations:
  - High grade results in high sale price
  - HIgh bathroom count results in high sale price
  - Homes on the waterfront are significantly more valuable
- FurPig recommends more research to explain why build year effects the model as it does.

Outline

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Overview

- Maple Homes is expanding to King County in Seattle Washington.

- They want their salesmen to succeed.

- They contracted FurPig Industries to make recommendations based on the King County home sales database.

- FurPig Industries Data Scientist Greg Osborne will deliver three recommendations based on three independent variables.

Business Problem

- Time is the greatest resource. Using time wisely is a great strength.

- The higher the sales price of a home, the higher the commission and profit.

- Maple Homes wants their salesmen to represent the highest priced homes.

- What can salesmen easily look for to find homes that will sell for high prices?

Modeling: Methods

- No single factor determines a home's price.

- Multiple linear regression accounts for this with multiple independent variables.

- I developed the model through the following steps:
  - Created model with two variables
  - Added two more variables for a total of four
  - Removed outliers that skewed the data
  - Normalized build year data
  - Checked against an automated process

- The final model yields three recommendations and leaves room for further research.

Modeling: Variables

- The final model used four independent variables:

- Grade Rating
- Build Year
- Waterfront
- Number of Bathrooms

- The final model put these four variables against one dependent variable:
- Sales price

Regression Results

- Sales price increased by $196K / Grade
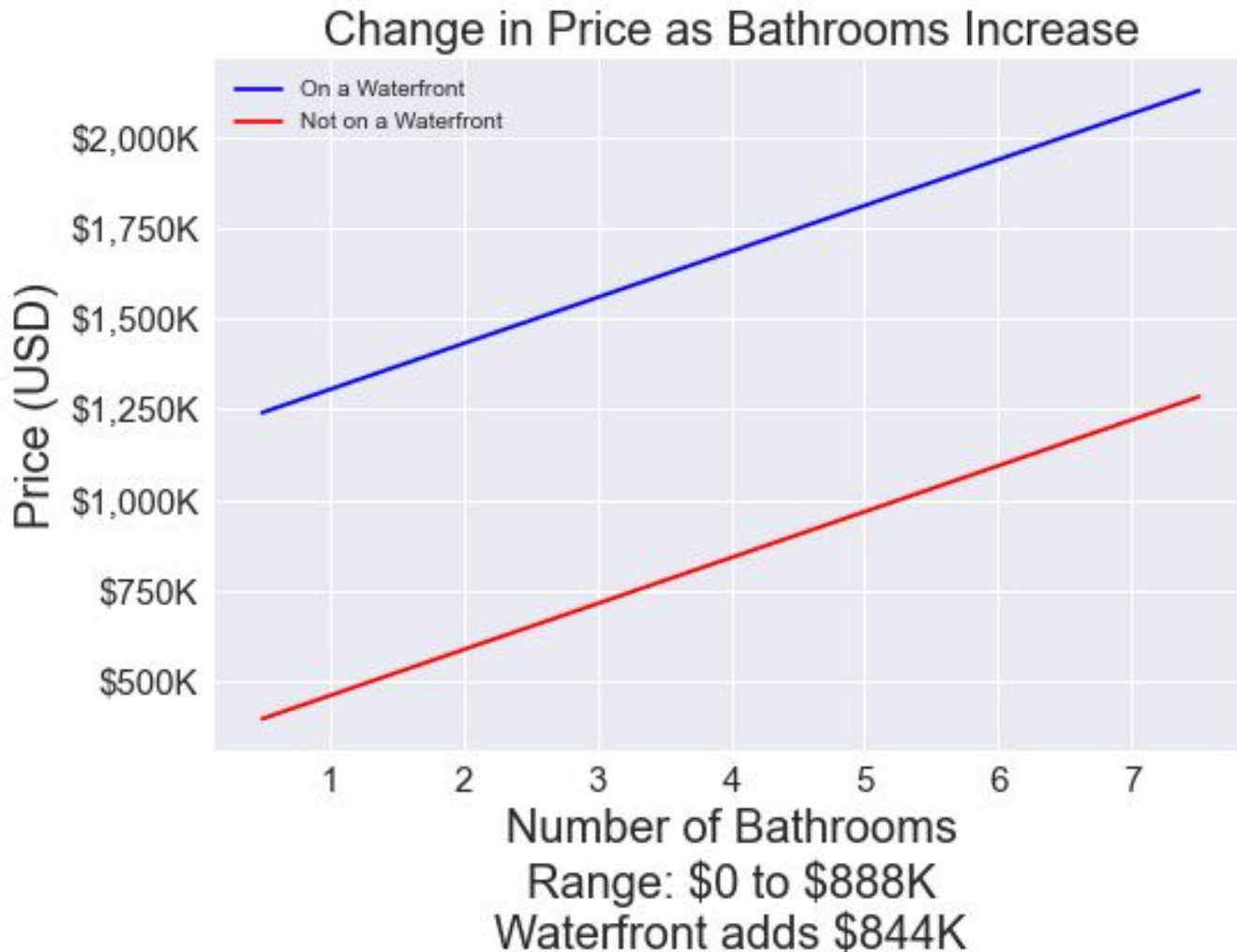- Grade rating average in King County: 8

(This graph represents average values for both number of bathrooms and year built.)

Change in Price as Grade Rating Increases

Legend:
- On a Waterfront
- Not on a Waterfront

Y-axis: Price (USD) — $-500K, $0K, $500K, $1,000K, $1,500K, $2,000K, $2,500K

X-axis: Grade Rating (Out of 13) — 4, 6, 8, 10, 12

Range: $0 to $1,962K
Waterfront adds $844K

Regression Results

- Sales price increased by $148K / Bathroom
- Number of bathrooms average in King County: 2

(This graph represents average values for both grade and year built.)

Change in Price as Bathrooms Increase

Legend:
- On a Waterfront
- Not on a Waterfront

Y-axis: Price (USD) — $500K, $750K, $1,000K, $1,250K, $1,500K, $1,750K, $2,000K

X-axis: Number of Bathrooms — 1, 2, 3, 4, 5, 6, 7
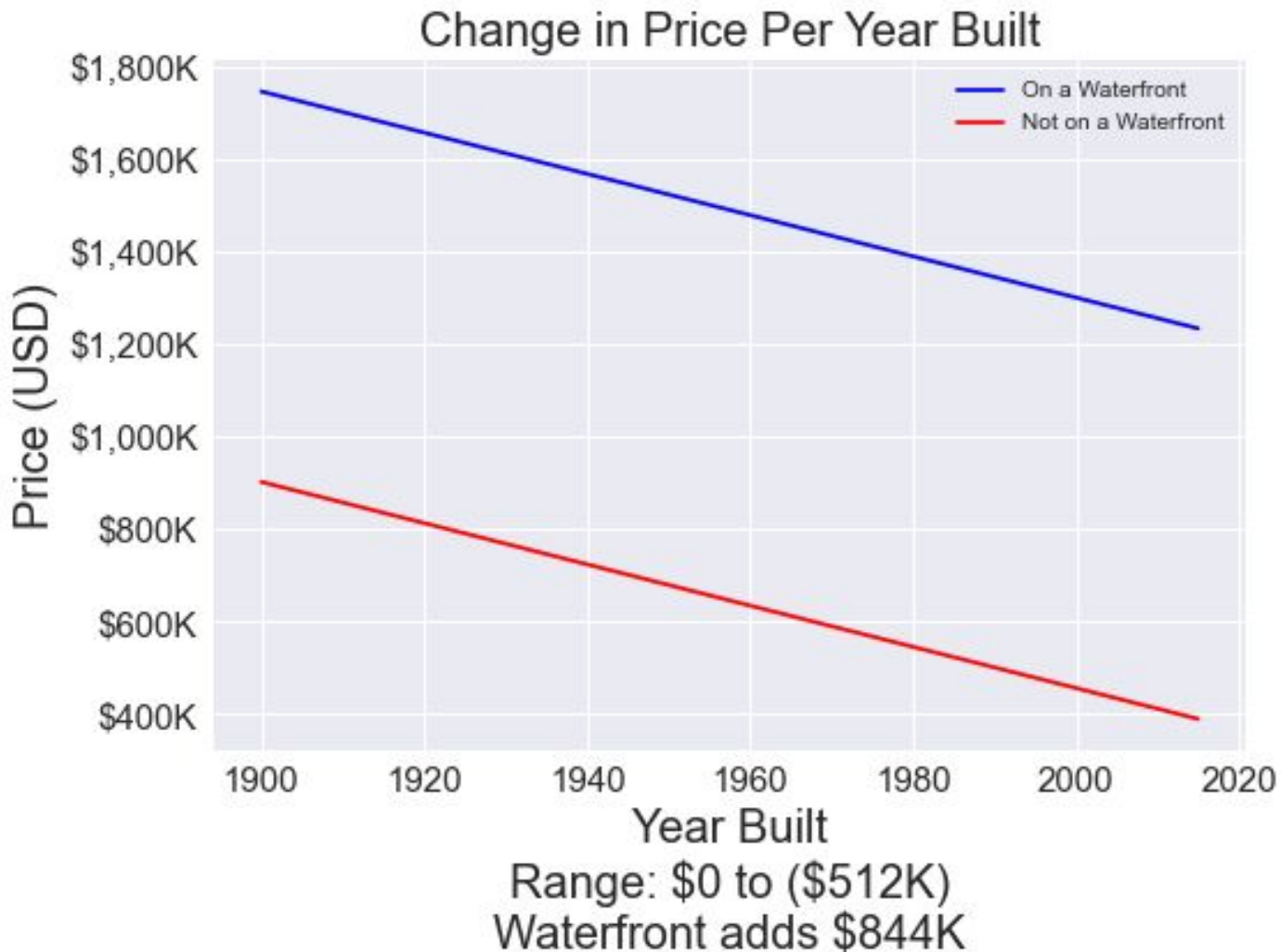
Range: $0 to $888K
Waterfront adds $844K

Regression Results

- Sales price decreased by ($148K) / Year
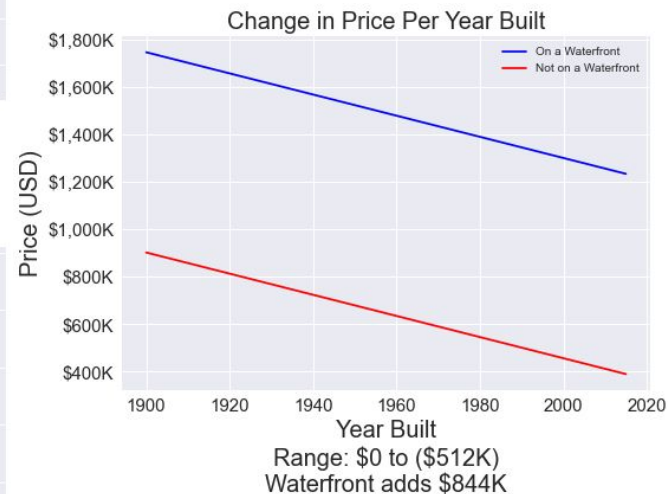- Average build year in King County: 1971

(This graph represents average values for both grade and number of bathrooms)

(The model normalizes the year since no homes were built in King county prior to 1900)

Change in Price Per Year Built

Legend:
- On a Waterfront
- Not on a Waterfront

Y-axis: Price (USD) — $1,800K, $1,600K, $1,400K, $1,200K, $1,000K, $800K, $600K, $400K

X-axis: Year Built — 1900, 1920, 1940, 1960, 1980, 2000, 2020

Range: $0 to ($512K)
Waterfront adds $844K

Regression Results

- Sales price increased by $844K if the home was on a waterfront.
- There are 143 homes on a waterfront in the dataset, 0.7% of all homes.

Change in Price as Bathrooms Increase

Number of Bathrooms
Range: $0 to $888K
Waterfront adds $844K

Change in Price as Grade Rating Increases

Grade Rating (Out of 13)
Range: $0 to $1,962K
Waterfront adds $844K

Change in Price Per Year Built

Year Built
Range: $0 to ($512K)
Waterfront adds $844K

Recommendation 1: Grade

- High grade is the best indicator of a high sale price.

- Grade data is readily available on the King County website.

- Salesmen should search for homes listed as high grades and offer their services to those homeowners.

- Information on the grade scale is provided in the appendix of this presentation.

Recommendation 2: Bathrooms count

- More bathrooms translates to a higher sales price.

- The average number of bathrooms in homes for King County is two.

- Salesmen should, again search for homes with a higher than average number of bathrooms and offer the homeowners their services.

Recommendation 3: Waterfronts

- The one hundred and forty six homes on the waterfront will each sell for a high price.

- A home on the waterfront sells for $844K more than the same home in another area.

  - These homes' average sale price is $1,717,215.

- Salesmen should make long term goals to represent one of these homes.

Next Steps: More Research

- Why are new homes cheaper?

- Location?

- More research to explain this is needed.

Thank You!

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Grade Rating Information

- Copied from the King County Assessor Website :
    - Represents the construction quality of improvements. Grades run from grade 1 to 13. Generally defined as:
    - 1-3 Falls short of minimum building standards. Normally cabin or inferior structure.
    - 4 Generally older, low quality construction. Does not meet code.
    - 5 Low construction costs and workmanship. Small, simple design.
    - 6 Lowest grade currently meeting building code. Low quality materials and simple designs.
    - 7 Average grade of construction and design. Commonly seen in plats and older sub-divisions.
    - 8 Just above average in construction and design. Usually better materials in both the exterior and interior finish work.
    - 9 Better architectural design with extra interior and exterior design and quality.
    - 10 Homes of this quality generally have high quality features. Finish work is better and more design quality is seen in the floor plans. Generally have a larger square footage.
    - 11 Custom design and higher quality finish work with added amenities of solid woods, bathroom fixtures and more luxurious options.
    - 12 Custom design and excellent builders. All materials are of the highest quality and all conveniences are present.
    - 13 Generally custom designed and built. Mansion level. Large amount of highest quality cabinet work, wood trim, marble, entry ways etc.