Home Features Analysis

Linear Regression Modeling to Understand Factors that Influence Home Sale Price

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Summary

Analysis, utilizing linear regression modeling, of home features dataset to identify features associated with higher home values, resulting in the following key points :

- Use excellent grade construction & design for renovations
- Maximize living space area
- Install gas/solar fueled heating system when feasible

Outline

- Business Problem
- Data
- Modeling Results
- Recommendations
- Limitations/Further Investigation
- Thank You

Business Problem

What modifications will maximize resale value of homes?

Data

Data on 30k+ properties located in King County, WA

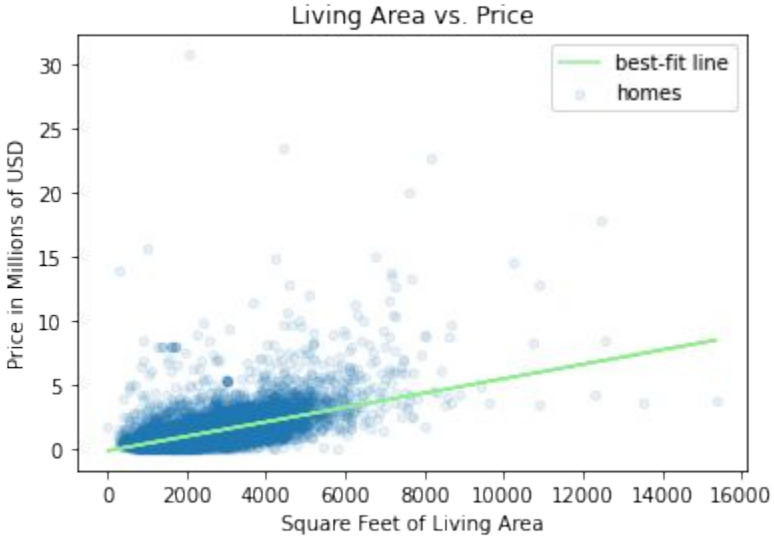
Includes records of the following:

- Utility types
- Construction & design quality
- Size of areas of specific use (e.g. garage, patio)

Modeling Results

Linear Regression Modeling reveals the following:

Price increases by .4% for every **square-foot of living space**



Modeling Results cont'd

- Price of a home with a **gas/solar heating source** is typically 15% greater than a home with an electric heating source (reference category)

- A home with an **Excellent grade** construction & design is typically worth 30% more than a home with Substandard grade

Recommendations

- Properties should be renovated to have a **construction & design grade of Excellent**
- Renovations should maximize available **living-space area**
- When feasible, a **gas/solar heating system** should be installed

Limitations & Further Investigation

- The data used has been shown to fail to meet some of the assumptions for linear regression modeling; a different model may better explain the data.

- Although certain modifications/features have been shown to have a stronger effect on home price than others, this report doesn't consider the costs involved in making those changes. Any proposed changes must be subject to a cost-benefit analysis to determine what type of modifications are truly most lucrative.

Thank You!

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