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# Ames Real Estate Consulting

🔍 By Jadi Smith



# Problem Statement

As a prominent real estate consultant in the country, the city of Ames, Iowa, asked me to help them predict the housing prices of a local builder's new development. They were interested in my expertise because I am an Adobe DSI student, and locals are anxiously worried that their mortgages would be affected by the new builds.

The objective of my new study is to develop a model that best predicts the price of Red Oak Construction as closely as possible. I aim to predict these prices so that the city of Ames can decide whether they should increase property taxes throughout the city or lower property taxes to help their citizens.



# The Analysis

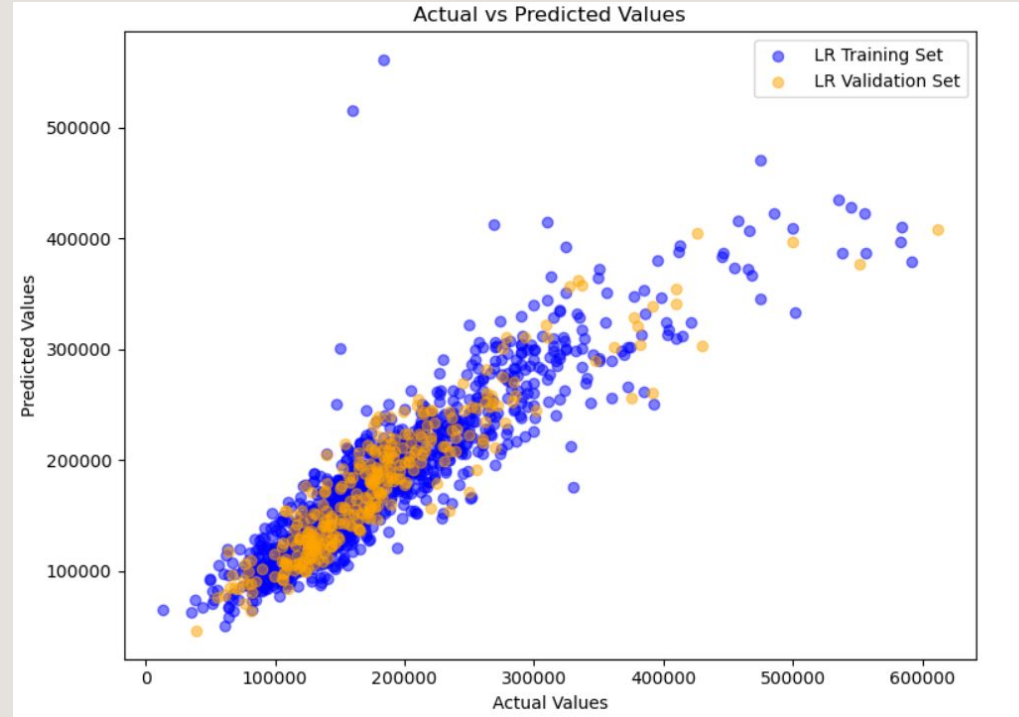
- Created multiple regression models and imposed hyperparameters for better performance. Selected the best model that yielded higher R-Squared value
  - Linear Regression
- Only included features that were selected by recursive feature elimination (RFE)
  - Example: Total Bath, Overall Qual, Year Remod/Add
- Processed recommended features based on collinearity
  - Example:
    - Overall Qual and Garage Cars: R value = 0.6
    - Bedroom AbvGrd and TotRms AbvGrd: R value = 0.64



# Model Results

Of all the models used, Linear Regression was able to account for 83.14% of variability around the target which was sales price.

RMSE: 32141.41





# Conclusions & Counsel

01.

## The Model Performance

Performed better than baseline which had a kaggle score of 78375.26238 RMSE.

Model received a score of 32305.68563 RMSE .

02.

## No to Tax Increases

Sales can be 25% to 30% more than assessed value(Ames Tribune). New construction can led to \$1k tax bill increase the following year(the Motley Fool).

03.

## Allow more development

Enhance the local environment and encourage more investments to stimulate economic growth.



# Resources

“Buying New Construction? Your Property Tax Bill Might Spike in a Year” by Maurice Blackman, 2023, The Motley Fool

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“Ames homeowners see a nearly 30% average hike on property tax assessments” by Kim Norvell, 2023, The Ames Tribune

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Link to Dataset: <https://jse.amstat.org/v19n3/decock/DataDocumentation.txt>

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Works Cited



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