House Prices: Advanced Regression Techniques

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Problem Statement

Finding a dream house for ourselves is an uphill struggle. A person will look for a few features while searching for a house but determining the exact price of the house for an individual would be a difficult task to do.

The value of the house is not merely determined by the number of bedrooms, square footage or proximity to a landmark but involves a lot more factors than that. Considering 79 explanatory variables describing every aspect of residential homes in Ames, Iowa, this project will help an individual to predict the final price of their dream home. This helps to maximize the value users can gain while keeping to a budget. This finding can also be used by a property agent or property brokerage firm to improve their sales and meet their consumer's needs to get them the best house.

We will be making the house price prediction based on the dataset obtained from Kaggle.

Plan of Action

Feature Engineering

- Data processing and data cleaning for missing attribute values
- Representing missing attribute value using heat map
- Cleaning outliers

Machine Learning Techniques

- Extreme Gradient Boosting
- Neural Network using Keras

Success Metrics

- Classification Accuracy
- Mean Squared Error

Teamwork Classification

Shweta Mestry

- Removing outliers
- Implementation of problem using Neural Network
- Implementation of problem using Xtreme Gradient Boosting
- Mean squared error

Siddhesh Kolhapure

- Data classification and Data cleaning
- Implementation of problem using Neural Network
- Implementation of problem using Xtreme Gradient Boosting
- Mean squared error

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- Representing missing attributes using heatmap
- Implementation of problem using Neural Network
- Implementation of problem using Xtreme Gradient Boosting
- Classification Accuracy

References

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