Housing Price Prediction

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Summary

This project will be an attempt to familiarize ourselves with the modification of a simple dataset for use in a beginner artificial intelligence research project. We will use a dataset to train multiple machine learning models to predict the price of a house. The goal of this project will be to determine which models may be most effective at the given task, as well as understand why each model performs as well as it does. Our selection of this project is largely due to the fact that the dataset is relatively easy to digest, even for the inexperienced, and the problem itself is easy to understand with a very simple to define objective.

Approach

We will utilize, as a minimum, three supervised learning algorithms. Each algorithm will be trained by the students conducting the project until a point of diminishing returns has been reached with regards to the accuracy of the algorithm's performance. Once each algorithm has reached this threshold, the results will be compared to determine which algorithm, of those tested, would be the most reliable source for pricepoint predictions, and all algorithms will be ranked based on their performance. Once the algorithms have been ranked, students will conduct an analysis on the characteristics of each algorithm as well as the causal relationships between an algorithm's characteristics and its result for this project.

Resources / Related Works

Prediction of Housing Prices Using Machine Learning is a research paper which outlines the research project on which the one described above is based. The approach will attempt to follow some of the methodology outlined in this paper for data processing and machine learning model creation.

Kaggle Dataset