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Intro to Machine Learning

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Lab 6 Report

In this lab, I learned how to use linear regression to predict housing prices based on different features like size, number of bedrooms, age, and location score. I used Google Colab to run my code, which made it easy to write, test, and fix my Python scripts. The process helped me understand how data and models work together to make predictions.

First, I loaded and prepared the dataset using **pandas** to organize the data into a DataFrame. Then I trained a **linear regression model** to find patterns between the features and the target variable, which in this case was the price of a house. Once the model was trained, I used it to make predictions for new houses that weren't part of the original data. Each new house had its own characteristics, such as different sizes and ages, and the model estimated the price based on what it learned earlier.

I also ran into an **IndentationError** while coding, which happened because of extra spaces before one of my lines. It reminded me how sensitive Python is to indentation. Fixing the issue helped me understand the importance of keeping my code organized and consistent. After correcting it, the model successfully ran and printed predicted prices for each house.

Overall, this lab showed me how powerful machine learning can be when applied to real-world problems like predicting housing prices. It was interesting to see how the model learned from past data and could make accurate guesses about new information. I also got a better feel for debugging and working with libraries like pandas and scikit-learn. This was my first time building a simple prediction model, and it gave me a better understanding of how data science tools come together to create useful insights.