

Academic Reflective Journal

Introduction

During the lab, I figured out how to build a linear regression model with Python. The goal is to get what this method does when guessing numbers, along with checking how close those guesses really are. On top of that, working with actual data showed me how inputs link to results, making it clear how equations mix with programming in everyday cases.

Description of Experience or Topic

The project aimed to guess home prices using traits like square footage, bedroom count, how old the house is, and its location rating. I built data that mimicked actual housing records. With tools such as Pandas, NumPy, Matplotlib, alongside Scikit-learn, I dug into the numbers, plotted visuals, then fit a predictive model. After that, I checked how accurate it was by looking at the R^2 value, plus mean squared and absolute errors.

Personal Reflection

At the start, I struggled to grasp what the R^2 score or the error figures were really saying. Yet once I looked closer at the outcomes, while matching forecasts to real prices, things started making sense. Turns out, a solid R^2 shows how closely the model's line follows the actual data points.

Discussion of Improvements and Learning

This lab gave me a clearer picture of how machine learning moves forward one piece at a time. Along the way, I picked up hands-on experience with writing code, showing data in visual ways, while also checking how well models perform.

Conclusion

This time around, I got a clearer picture of how machines guess outcomes from info. It boosted my trust in handling Python for everyday challenges, also pushing me to dig deeper into AI and data stuff.