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Intro to Machine Learning

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Lab 3 Report

This lab helped me understand how the machine learning process works. Using the Wine dataset made it easier to see how supervised learning works. I also learned the importance of splitting data into training and testing sets to make sure the model is learning correctly.

Working with Logistic Regression and Decision Trees showed me that not all algorithms produce the same results. Logistic Regression performed the best, which honestly surprised me at first. I realized this was because of the way it handles data. Logistic Regression works better with continuous data. Comparing their accuracy and confusion matrices helped me understand how to measure performance more clearly.

To improve performance, I would try adjusting the model's settings and also test different parameters to see what works best. I think using a cross-validation system could also make the results stronger. I really like using seaborn and matplotlib as well. The graphs made it way easier to spot patterns and actually understand what the data being shown was.

This lab gave me a clearer picture of how supervised learning and model evaluation work together. It made me more confident in understanding how machine learning will be used in the real world.