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L02_Reflection Journal

ITAI 1371 Intro to Machine Learning

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This lab felt like a wake-up call about how powerful these tools really are. When I first opened up Pandas, I honestly thought it was just a slightly fancier version of Excel. But the moment I grouped the iris data by species and got the averages, it hit me—it wasn't just about organizing numbers, it was about finding stories hidden inside the data. That shift, from “just numbers” to “patterns and meaning,” made me see why people take data science so seriously.

The part that really clicked for me was visualization. Staring at rows and rows of data didn't mean much at first, but once I made that scatter plot, everything changed. Suddenly I could see clusters, differences between species, and even overlaps that made me start asking “why” instead of just “what.” That's when I realized graphs aren't just for making a final report look nice—they're for thinking. They spark curiosity in a way number on a screen never could.

NumPy gave me another one of those lightbulb moments. At first, running things like `np.mean()` felt too easy, like I wasn't really doing the work. But then I realized the magic of vectorization—how it does calculations across entire datasets instantly. That's when I connected it back to math I already knew, and suddenly the formulas didn't feel abstract anymore. Funny enough, the times I messed up were the most helpful. I used to get frustrated at error messages, but now I'm starting to see them as little guides pointing me to what I need to understand.

What surprised me the most, though, was GitHub. Before this, I treated my code like something temporary—just files I’d save on my computer and forget about. But the idea of version control and creating a portfolio made me think of coding as more of a craft, something worth keeping track of and even showing off. It kind of changed the way I see my work—it’s not just about getting the lab done, it’s about building something I can look back on and actually be proud of.

When I step back and look at the whole experience, I realize I stopped treating the tools as separate steps and started seeing them as part of one big cycle. Clean, analyze, visualize—it’s all connected, and each step makes the others stronger. I also noticed that the struggles weren’t setbacks—they were actually the moments where I grew the most. Instead of just chasing the “right answer,” I started appreciating the process, and that feels like a big shift in the way I’m learning.