

Reflective Piece: I knew it would be hard, but I didn't know this hard.

If I had to sum up honours so far in one sentence, it would be: "I knew it would be hard, but I didn't know this hard." This year has humbled me in the best way possible. I've gone from reading papers thinking, "I have absolutely no idea what is happening," to actually being able to critique methods and understand why researchers made certain decisions. That feels like a small victory every time. One thing I've really enjoyed is seeing how bioinformatics sits at the intersection of biology, statistics, and computer science. It's chaotic at times (much like my brain during assignment season), but it's also incredibly exciting because there's always another problem to solve.

A specific moment that stands out was working on my own cancer drug response prediction models. Coming from a purely biological sciences background, coding was completely foreign to me. I didn't even know what a terminal was, let alone how to instruct it to carry out tasks for me. I spent longer than I'd like to admit debugging something that wasn't actually broken, and re-reading machine learning definitions over and over (funnily enough, a random forest isn't actually a forest, and it isn't random either). But somewhere between the confusion and the repetition, it clicked: machine learning-based science is awesome, and I love it. That was the moment it stopped feeling like a black box and started feeling like something I could actually reason about, and wanted to pursue further.

Writing the SciComm blog post pushed me in a different direction, exploring African-based science and what it means for research to actually reflect the people it's meant to serve. Explaining a genetics paper to someone with no scientific background forced me to strip away the jargon I'd gotten comfortable hiding behind, and figure out what the finding actually meant and why anyone outside the field should care. It was a good reminder that if I can't explain my own research simply, I probably don't understand it as well as I think I do.

Honours has also taught me that Googling, rereading a paper five times, and questioning your entire existence are apparently all part of the scientific process. I've learned to be more patient with myself and to accept that not understanding something immediately doesn't mean I won't understand it eventually, or that I'm not meant to be in science. If

anything, it's taught me that women in STEM rock, even when we're a bit confused at times.

Although there have definitely been stressful moments, I can honestly say I've grown a lot. I'm leaving each module knowing a little more than I did before and, more importantly, asking much better questions. I still have a lot to learn, but for the first time I can genuinely picture myself contributing to research instead of just reading about it. Here's to surviving honours, and hopefully thriving by the end of it!

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