



Laidlaw Scholars Undergraduate Leadership and Research Programme
Record of Reflection

Crampin' My Style: A Reflective Journey Through the Science of PMS

Gurra Efendija

Research Advisor: Dr. Ahmed El-Soheemy

Tuesday 27th April 2024

Eager Beginnings and a Rocky Start

When I first embarked on this research journey, I was like a kid in a candy store—eager, excited, and ready to dive into the world of genetic research. The thrill of contributing to the scientific community was palpable, and I couldn't wait to get started. However, that excitement quickly turned into an overwhelming wave of confusion when I realized that I had to familiarize myself with R and RStudio—tools that I had very limited experience with. My initial enthusiasm met reality hard as I struggled to navigate this unfamiliar territory.

The learning curve was steeper than I anticipated, and what I thought would be a quick onboarding process turned into hours of trial and error, frustration, and a few too many Google searches. Thankfully, I wasn't alone in this struggle. With the guidance of more experienced friends and my incredibly supportive El-Sohemy lab members, I slowly started to get the hang of it. Their patience and willingness to help were lifesavers, turning what could have been a demoralizing experience into a valuable learning opportunity.

The Battle with Time Management

Time management—what a beast! Conducting most of my research virtually posed challenges I hadn't fully anticipated. While working from home might sound like a dream to some, it quickly became a juggling act for me. On one hand, I had my research to focus on, but on the other, I had little cousins who seemed to believe that my sole purpose in life was to play with them and take

them to the beach. Balancing the demands of serious academic work with the lure of summer fun was no easy feat.

There were days when it felt impossible to concentrate, and dedicating consistent time to my work was a constant struggle. I found myself sneaking in research during the early mornings or late at night when the house was finally quiet. It wasn't the most ideal setup, but it taught me the importance of setting boundaries and the value of discipline, even in less-than-ideal circumstances.

A Close Call with Disaster

As if time management and RStudio weren't enough to keep me on my toes, I also had the added pressure of knowing this was my first major research project. I was paranoid about doing something wrong and reporting false data—a nightmare scenario for any researcher. And then, it almost happened.

Midway through my project, I realized that my code in R had been setting the wrong genotype as the reference group. Instead of using the major homozygous genotype, it was using whichever genotype came first alphabetically. The result? Nearly 10,000 data points were incorrect. Moreover, I didn't catch the mistake until after I had recorded all the data.

Panic set in as I imagined the implications of this mistake. Fortunately, I caught the error before writing my report or publishing any findings. During a meeting with my supervisor, we noticed

something odd—there was such low genetic variation in the Caucasian group that we couldn't run any logistic regressions for one of the SNPs. My supervisor found this unusual for a Caucasian cohort but couldn't pinpoint the issue. After hours of staring at my code, the problem finally clicked, and I was able to correct it.

This experience was a harsh but invaluable lesson. It taught me not to let overwhelming situations paralyze me, the importance of teamwork, and the need for perseverance. Although it was tedious to go back and correct everything, I'm proud that I didn't let it demoralize me. Instead, I chose to see the glass half full and think, "Thank goodness I realized this now!"

Lessons in Leadership and Growth

This research journey was not just about genetics and data analysis; it was also a deep dive into personal growth and leadership development. I learned that leadership isn't just about guiding others; it's also about leading yourself through challenging situations. The experience reinforced the importance of perseverance, especially when faced with setbacks. It also highlighted the value of teamwork—knowing when to reach out for help and how to support others in return.

Over the summer, I found myself applying these leadership skills in ways I hadn't anticipated. Whether it was managing my time amidst distractions, troubleshooting problems that seemed insurmountable, or learning to take ownership of my mistakes, this journey has shaped me into a more resilient and resourceful individual. I've come to appreciate the process as much as the

outcome, knowing that the skills I've honed will serve me well in both my academic and professional future.

In the end, this rollercoaster of a research experience has left me with more than just data and findings—it has given me a deeper understanding of what it means to be a leader, a scientist, and someone who doesn't back down in the face of a challenge.