

## Profile

Data-driven firmware engineer with a strong analytical foundation, I bring large-scale data analysis skills in Python and SQL. Demonstrated success in leading teams, mentoring interns, and managing complex firmware projects from design to deployment. In my spare time I enjoy skiing the Rocky Mountains and experimenting with generative AI.

## Education

### Bachelor of Science in Computer Science – University of Calgary

May 2018 – May 2022

President of the Computer Science Undergraduate Society, NSERC Undergraduate Student Research Award.

**GPA:** 3.49/4.00

## Work Experience

### Embedded Firmware Developer – Simply Embedded

Jan 2021 – May 2024

- **Firmware Development:** Engineered robust RTOS C/C++ firmware solutions on 32-bit ARM microcontrollers, ensuring high reliability. Utilized Linux as a primary development environment and maintained professional version control with Git.
- **Data Analysis with Python:** Leveraged Python to automate product testing as part of manufacturing. Built processes to extract and store device test output to ensure traceable QC processes.
- **Technical Leadership:** Led the interview and selection process for five engineering interns, providing hands-on training in firmware development and debugging to ensure they quickly became productive team members.
- **Quality Assurance:** Conducted root-cause analysis on device telemetry data to identify inconsistencies, I collaborated closely with the QA team to document issues and implement solutions.
- **Client Engagement:** Excelled in client interactions, from cold conversations at tradeshow (CES 23/24) to in-depth meetings during international trips. Experienced in converting customer business needs to concrete development objectives.
- **Data Management:** Utilized SQL for querying and managing device telemetry data stored in Azure. Analyzed large datasets to conduct root-cause analysis and work closely with the QA team to document issues and implement solutions.
- **Agile Project Management:** Experienced in software development environments, from collaborating on Git-based projects with teams of 20+ members to leading a small agile team with Jira to deliver a prototype product.

### Research in Theoretical Computer Science – NSERC Research Award

Sept 2021 – Apr 2022

- **Mathematical Research:** Studied computational number theory under Dr. Michael J. Jacobson, using algorithms and computational methods to explore Aliquot sequences, contributing to the understanding of their statistical properties.
- **High-Performance Compute:** Developed scalable and parallel algorithms in C and OpenMP, effectively leveraging an 800GB RAM, 80-thread research cluster to optimize the computation of Aliquot sequences.
- **Comprehensive Documentation:** Produced a thorough undergraduate thesis and Doxygen-generated code documentation, providing a clear foundation for future research on Aliquot sequences.

	Skills	Tools / Libraries
Programming	C/C++, Java, Web development, Bash	Linux, Windows, Github, Docker, VS Code
Data Analysis	Python, SQL, Excel, Telemetry analysis	Azure, SQLite, OpenAI API, Jupyter
Project Management	Agile methodologies, Sprint planning, QA	Jira, Microsoft Teams, Smartsheet

### Retail Sales Staff – Camper's Village

May 2014 – July 2021

- **High Service Sales:** Engaged with customers to understand their requirements and offer tailored advise on camping equipment.

## Other Experience

### President – Computer Science Undergraduate Society

Sept 2020 – Feb 2021

- **Organized CalgaryHacks 2021:** Led a 20-member volunteer team, bringing together over 700 participants and distributing \$15,000 in prizes, fostering growth in Calgary's tech community.
- **Stakeholder Communication:** Managed sales, from package development to payments, with outside sponsors. Facilitated regular meetings with the Computer Science Department to report on club activities.
- **COVID-19 Adaptation:** Successfully transitioned CalgaryHacks to a remote format, leveraging Discord and Zoom for seamless event execution, communication, and judging.