Jonah Lee

(778) 233-5030 | jonahjacqueslee@gmail.com | Website | GitHub | LinkedIn

Education

Engineering Physics | University of British Columbia (91% GPA)
September 2023 - May 2028
Relevant Courses: CPEN 221 (Software Construction), MATH 307 (Applied Linear Algebra), ELEC 221 (Systems & Signals), ENPH 253 (Introduction to Instrument Design), ENPH 270 (Mechanics II), MATH 217 (Multivariable and Vector Calculus), MATH 257 (Partial Differential Equations), MATH 255 (Ordinary Differential Equations)

Experience

Kinetic Inductance Detector Map-Maker Developer | UBC Physics & Astronomy
January 2025 - April 2025

- Researched and developed map-making techniques for the Fred Young Submillimeter Telescope as part of the CCAT collaboration
- Performed characterization and analysis of Kinetic Inductance Detector data in Python
- Designed a cryogenic LED mapping PCB and aluminium collimator for CCAT's 850GHz detector array using over 5000 LEDs

Software and Hardware Development Intern | Cypress Solutions
May 2024 - August 2024

- Designed an automated firmware regression testing suite using Robot Framework, ensuring product reliability, automating quality assurance and providing timely feedback to developers
- Leveraged custom hardware to verify functionality over serial, ethernet, wi-fi and cellular
- Reworked PyTest testing suite to increase code coverage to 92% and improve maintainability

Other Experience

Race Strategy & Simulation Co-Lead | UBC Solar
September 2023 - Current

- Optimize solar race car performance in the American Solar Challenge by applying quantitative strategies, leveraging insight from data analysis and Python physics models.
- Lead project management and timelines within a large scale project and provide guidance to new team members
- Develop Python code for data analysis, simulation, physics and telemetry processing

Engineering Physics Robot Competition | ENPH 253 Firmware on Github
May 2025 - Aug 2025

- Implemented robot line following algorithms: PID loops & tuning, error signal calculation, reflectance sensor design and calibration
- Encapsulated sensors into easy-to-use C++ objects (reflectance sensors, magnetometers, IMU)
- Refined a fast-growing code base with refactors, documentation, FreeRTOS integration and scheduling, peer code review

Skills

Software & Technologies	Python, C++, NumPy, SciPy, Pandas, SQL, FastAPI, Kafka, PostgreSQL, React, Typescript, MATLAB, Git, GitHub, Linux, C, Java, Excel, BitBucket, Jenkins, Docker, Robot Framework
Other	Physics, Mechanics, Dynamics, Partial Differential Equations, Linear Algebra, Signal Processing, Data Analysis, Technical Communication, Jira, Monday, Fluent in French (DELF B2 Certified)

Achievements & Certifications

June 2024: ISED Canada Amateur Radio Certification - Basic with Honours
November 2023: BC Achievement Scholarship & District/Authority Scholarship
April 2022: DELF B2 French Language Certification - 91% (50% to pass)