Internship: Software and Algorithm Development for Device Optimization – QuantaSense

Location: Calgary
Employment Type: Internship

About Quantasense

At Quantasense, we're pioneering the transition of quantum sensing from the lab to real-world applications. Our work sits at the intersection of photonics, microwave engineering, and quantum physics, covering everything from theoretical modeling and design to fabrication and precision measurement. We push the boundaries of physics to the quantum mechanical limit, enabling unprecedented clarity in data, faster decision-making, and breakthroughs once thought impossible.

Role Overview

As a Software and Algorithm Development Intern, you will work on creating intelligent feedback systems for device optimization. This role involves writing algorithms that interface with laboratory equipment to implement closed-loop control, developing software for data acquisition and analysis, and collaborating with the testing team to integrate improvements into existing workflows.

Key Responsibilities

- Develop algorithms to create feedback loops for optimizing device parameters.
- Write software to interface with various lab equipment for data collection and analysis.
- Implement tools for device characterization and performance evaluation.
- Collaborate with the testing team to integrate software changes and validate improvements.
- Document workflows and maintain code for reproducibility and scalability.

Preferred Skills/Interests

- Currently enrolled in or recently graduated from Electrical Engineering, Physics, Computer Science, or a related program.
- Proficiency in programming languages such as Python, C++, and MATLAB.
- Familiarity with instrument control protocols (e.g., GPIB, VISA, or similar).
- Experience with data analysis and visualization tools.
- Strong problem-solving skills and ability to work collaboratively in a team environment.

Why Join Quantasense?

- Work at the frontier of quantum sensing technology, taking cutting-edge physics into real-world applications.
- Be part of a team where your contributions directly shape products and processes.
- Hands-on experience integrating software with advanced hardware in a collaborative environment.
- Opportunity to tackle challenging problems in photonics, microwave engineering, and quantum-limited sensors.
- Join a company committed to innovation and pushing the boundaries of what's possible in sensing technology.

Think the role is right for you? **Email a resume and a cover letter to hiring@quantasense.ca**