

Systems Engineer (Summer 2019 Co-op 4 or 8 months)

Description:

Motion Metrics International is a high-tech private corporation located on the campus of the University of British Columbia that designs, develops, and deploys advanced monitoring solutions for heavy-duty industries. Our products combine custom-designed rugged hardware and “embedded + cloud-based” software to address some of the most challenging problems in the mining industry by using imaging and other sensor technologies.

Internship Objectives:

- In coordination with the product development engineering team, identify, communicate and execute and/or support execution for all systems engineering deliverables to R&D projects.
- Standardize format of documentation to ensure consistent, quality work is being performed.
- Create, use and design FMEA's.
- Transform user requirement to product requirement specifications.
- Prepare validation plans and traceability matrices.

Requirements:

- Working towards BSc or MSc in Electrical or Mechanical Engineering
- Minimum one year of hands-on hardware design experience in product development.
- Experience with various standard interfaces such as DDR4, Ethernet, USB, SPI, I2C.
- Experience with sensors (i.e. motion, sound, video, vibration, light).
- Experience with wireless modules (i.e. WiFi, Bluetooth, BLE, LoRa, GNSS, GPS).
- Experience with power solutions (i.e. battery-based, mains-powered, power-over-ethernet).
- Experience with mechanical drawings for new product development using Solidworks.
- Strong organizational and documentation skills.

Beneficial Skills

- Understanding of the development life cycle.
- Expertise in design and troubleshooting of analog and digital electronic circuits including PCBs.
- Proficiency in programming language such as C++ or python.
- Developing embedded firmware for individual system components and fully-integrated systems.
- Proficiency with version control (git).