NZ technologies inc.
Crafting the Future of Intuitive Experiences

JOB DESCRIPTION FOR:
2025 Winter Embedded Hardware Engineering Co-op

JOB BRIEF:

Start Date: January 2nd, 2025
Duration: 4 or preferably 8 months, with possible extension to 12 or 16 months

Enthusiastic engineering student studying in the fields of mechanical and electrical systems with a passion for solving real industrial problems with the use of sensors, robotics, and embedded processors. The position focuses on hands-on prototyping, mechanical design, electromechanical assembly, QA/QC, and system design.

BACKGROUND:
Established in 2009, NZ Technologies Inc. (NZTech) works in the field of Human-Machine Interaction (HMI) with a specialization in 3D Touch™ sensors, 3D machine vision, and learning algorithms. NZTech's proprietary software and hardware are designed and built in-house at our office in Vancouver, BC. Our core products, TIPSO™ and HoverTap™ are proprietary technology that has evolved from the technical expertise and unique industrial experience of our engineering team, with significant feedback from our team of experienced advisors from the medical field and industry partners.

TIPSO™ is an award-winning Human-Machine Interaction (HMI) line of products for Interventional Radiologists and surgeons who need to efficiently interact with radiology images in the Operating Room (OR). It is designed by doctors, for doctors, to fit seamlessly in their challenging work environment. NZTech is continuously working with VGH and other hospitals to research, develop, and deploy new sensing technologies in the Operating Room to aid doctors in their critical work.

HoverTap™ is a new way to interact with displays using 3D Touch™. Our team works on developing novel solutions that utilize our 3D Touch™ technology to craft new interactive experiences for our users. HoverTap™ has been integrated or retrofitted into laptops, tablets, store kiosks, and elevators in numerous fields and applications . The HoverTap™ sensor allows for simple hand-wave and finger-point interactions. With 3D Touch™ capability, HoverTap can help reduce the use of high contact surfaces, provide sensing over thick security glass, and even operation of touch displays with gloves and in the presence of liquids.

MINIMUM JOB REQUIREMENTS:

- Currently enrolled in a program at an accredited Canadian post-secondary
- A Canadian citizen, permanent resident, or have refugee status
- Comfortable commuting to the job location
- Excellent verbal communication and writing skills
- Proven interpersonal and leadership skills

nz technologies inc.
Crafting the Future of Intuitive Experiences

Phone: 1-604-336-9464
Email: info@nztech.ca
Address: #202 1401 W Broadway
Vancouver, BC Canada V6H 1H6

JOB DESCRIPTION:

A new engineering student is desired to join the team and work on the hardware team to help day-to-day prototyping and engineering design.

The student's duties will fall under the following areas:

- Using workshop tools and 3D printers to manufacture and assemble new embedded devices and/or prototypes
- Prototyping, coding, and testing new ideas using microcontrollers, sensors, and robots
- Documenting technical development progress, findings, and design documentation
- Manufacturing and assembling new embedded devices and/or prototypes
- QA/QC assembled devices in-house
- Assisting other team members in designing mechanical designs for new product modules using Solidworks
- Assisting other team members in specifying, simulating, and validating the electrical schematics necessary for embedded processor systems and sensor modules
- Actively working with the team to brainstorm, discuss, and solve technical problems

SKILLS/EXPERIENCE:

The prospective candidate will have a background and interest in:

- Electromechanical system assembly or related experience
- Keen interests in/profound experience with 3D printing
- 3D mechanical modelling and design with CAD (preferably SolidWorks)
- Soldering, circuit troubleshooting, system verification
- Electronic parts research and selection
- Professional documentation practices
- Effective at independent problem-solving
- Hand tools & parts assembly
- Good communication skills (informal and formal)
- Microcontroller programming and debugging (C/C++)
- Circuit design for electronics and power electronics
- Machine shop fabrication
- Robotics development for testing and validation (Python/C++)

Located in the lively and energetic district of Vancouver, the office environment is young and friendly while full of exciting intellectual challenges. The ideal candidate would embrace the fast-paced start-up environment and be ready to learn new skills as needed. The company is going through rapid growth and varying schedules should be expected. The nature of this position offers outstanding opportunities for career growth and fun challenges outside of a typical 9-to-5 job. Join us if you think you are the right candidate!

Please submit **both your resume and cover letter** to naomi@nztech.ca with the job title as the subject of the email. A portfolio would be an asset. We will contact you if we see a good fit between the candidate and the position.