

**JOB DESCRIPTION FOR:**  
**2023 Spring Embedded Hardware Engineering Co-op**

**JOB BRIEF:**

Start Date: Jan 3<sup>rd</sup>, 2023

Duration: 8 months, with possible extension to 12 or 16 months

Enthusiastic engineering student trained in the fields of mechanical and electrical systems with a passion for solving real industrial problems with the use of sensors, actuators, 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 specialization in touchless 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 and elevator fields.

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™ Lift is a new way to touchlessly and safely use elevators. Easily retrofitted to existing buildings, the HoverTap™ panel allows for simple hand-wave and finger-point interactions - getting you to your destination without a single touch. With the danger of disease transmission becoming an everyday threat in the 'new normal', HoverTap™ eliminates high-touch surfaces in the elevator and keeps you and your loved ones safe.

**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

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**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 actuators
- 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 modeling 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 + debugging
- Circuit design for electronics and power electronics
- Machine shop fabrication

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 schedule 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](mailto: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.