

Ace Ha

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PROFESSIONAL EXPERIENCE

TM ENGINEERING

BURNABY, BC

Junior Mechatronics Designer

Sep 2025 - Present

Brought on as a Mechatronics Designer to lead the R&D of an automated sample splitter system, combining electrical, mechanical, and control design to deliver a reliable and scalable solution.

- Designed and tested mechatronic subsystems including servo motors, vibratory feeders, rotary tables, and precision disk mechanisms.

FOOD PROCESS SOLUTIONS CORP

RICHMOND, BC

Robot Programmer

Feb 2025 - Sep 2025

Joined as one of the robotics programmers in the field controls division to integrate ABB robots into large-scale food automation systems, directly impacting production efficiency and uptime.

- Programmed and integrated ABB industrial robots with PLCs and HMI for automated food processing systems.
- Conducted motion control, path planning, and troubleshooting to improve robot reliability in production.
- Reduced downtime through debugging and optimization, improving line efficiency.

SANCTUARY AI

VANCOUVER, BC

Robotics Technician

Apr 2024 – Dec 2024

Hired as a Robotics Technician during a key growth phase to support development of humanoid hand/actuator systems.

Worked hands-on in assembly, calibration, and testing to improve robotic reliability.

- Conducted precision assembly of robotic actuators and hands to ensure optimal dexterity, movement, and durability.
- Performed electrical assembly, including wiring, soldering, and integration of sensors and control electronics.
- Operated actuator testing systems and calibrated different sizes of motors to meet strict performance specifications.
- Diagnosed, troubleshooted, and repaired robotic hand/actuator systems, minimizing downtime, improving reliability.
- Collaborated with cross-functional engineering teams to prototype, validate, and improve robotic hand designs.

TOYOTA

Da Nang, Vietnam

Automotive Technician

May 2023 – Aug 2023

PHAN CHAU TRINH MEDIA

DA NANG, VIETNAM

Photographer

Sep 2018 – Dec 2018

EDUCATION

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY (BCIT)

BURNABY, BC

Diploma in Mechatronics and Robotics Engineering

Sep 2022 – May 2024

- Focus: Robotics Assembly, Robot Arm Programming, Control Systems, PCB & Sensor Design.
- Awards:** Bronze Medal – Electronics, BC Skills Competition (SMD soldering, PCB design, sensor interface).

TECHNICAL PROJECTS

Tensile Test Machine (BCIT, 2024): Built using TMS320 & Raspberry Pi; designed HMI for data collection & analysis.

PLC Elevator Control (BCIT, 2024): Programmed elevator system with Allen Bradley PLCs, and HMI.

Motor Drive & Voltage Regulator (BCIT, 2023): Designed H-Bridge motor drive with a braking system.

ABB Robot Gripper (BCIT, 2022): Modeled & prototyped gripper in SolidWorks, 3D printed for testing.

Delta Robot (2023–now): Integrated STM32, Raspberry Pi, and OpenCV vision for product classification.

SKILLS & INTERESTS

- Technical Skills:** Robotic assembly & integration (hands, actuators, grippers); Fine soldering & micro-wiring; Harness fabrication; Actuator calibration; PLCs (Allen-Bradley); Robotics systems (ABB, FANUC, Delta, SCARA); Programming (Python, C, MATLAB); CAD/EDA (SolidWorks, OnShape, RobotStudio, Altium, KiCad); Embedded systems (STM32, MSP430, Raspberry Pi, ESP32); Protocols (I²C, UART, SPI, RS485, RS232); Fabrication (3D printing, CNC, laser cutting, welding).
- Interests:** Guitar & piano, soccer, photography, hiking.