



ROBERT HARDIE

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SUMMARY

Mechanical Engineering student with hands-on experience in structural design, testing, and fabrication. Demonstrated ability to lead complex, cross-functional projects from concept to delivery. Skilled in CAD modeling, FEA, thermal systems, and event logistics. Seeking engineering roles that value creative problem-solving, technical execution, and strong team collaboration.

EDUCATION

Bachelor of Mechanical Engineering Sep 2023 - May 2025

British Columbia Institute of Technology — Burnaby, BC

- Graduated with Distinction
- BCIT Foundation Scholarship – awarded for academic performance

Diploma in Mechanical Engineering Technology (Design Option) Sep 2021 - May 2023

British Columbia Institute of Technology — Burnaby, BC

- The BCIT Scholarship in Mechanical Engineering
 - BCIT Mechanical Design Award – top of class distinction
 - BC Hydro Award – awarded for academic excellence and leadership
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PROJECTS

IndyCar Electric Conversion Capstone – BCIT Jan 2023 - May 2025

Design & Testing Engineer, Documentation Lead, Meeting Chair

- Designed, analyzed, and fabricated a custom motor mounting system to replace the removed engine
- Developed 3D CAD models, performed FEA, and led prototype testing and validation
- Led creation and refinement of technical documentation, templates, and version control processes
- Chaired meetings and recorded minutes to coordinate efforts across multiple sub-teams
- Directed beautification efforts: surface finishing, powder coating, and vinyl wrapping components
- Supported final assembly and presentation at BCIT Engineering Expo

Svante Capstone Project – BCIT Sep 2022 - May 2023

Design & Testing Engineer, Communications Lead, Meeting Chair

- Developed enclosure, test plate, and cooling system for a temperature-controlled testing rig
- Selected and integrated Peltier modules, sensors, power systems, and water cooling loop
- Created CAD and technical drawings, performed FEA, and assisted in testing procedures
- Chaired meetings and maintained project documentation; led internal and sponsor communications

WORK EXPERIENCE

Production Crew – MRG Live Various Sites Across BC	Mar 2022 - Present
<ul style="list-style-type: none">Installed and operated lighting, staging, and PA systems for live eventsAssembled festival infrastructure including tents, signage, seating, and décorResolved technical/logistical issues on show days and acted as point-of-contact for organizers and artistsOperated 5-ton trucks; loaded/unloaded gear and equipment safely and efficientlyRan live sound for side stages and built temporary display structures	
Exterior Maintenance Technician & Team Lead – Rotban Ultra Cleaning Coquitlam, BC	Apr 2020 - Aug 2022
<ul style="list-style-type: none">Operated and maintained gas-powered pumps and equipmentLed safety training and supervised job site operationsConducted chemical handling and cleaning of building exteriors using boom lifts	
Driver & Operations Manager – A&B Simple Logistics Ltd Surrey, BC	Feb 2018 - Mar 2020
<ul style="list-style-type: none">Oversaw daily logistics operations and minor vehicle maintenanceDelivered and assembled customer furniture; modified setups to meet client needsDeveloped CRM processes and trained new staff	

TECHNICAL SKILLS

- Project Management:** Meeting facilitation, documentation systems, team communications, timeline tracking
- CAD & Simulation:** SolidWorks, Inventor, AutoCAD, ANSYS
- Mechanical Design:** FEA, GD&T, fatigue analysis, bolted/welded joints, gear sizing
- Testing & Fabrication:** Thermocouple sensors, temperature control, machining, vinyl wrapping
- Non-Destructive Testing (NDT):** Liquid Penetrant, Magnetic Particle, Ultrasonic, Radiography, Eddy Current
- Controls & Circuits:** P&IDs, 3-phase power, basic PLC & thermal systems
- Event Production:** PA systems, stage lighting, audio mixing, display construction
- Equipment:** Experienced with scissor lifts, boom lifts, and forklifts (*previously certified*)

ADDITIONAL INFORMATION

- Languages:** Fluent in English
- Certifications:** WHMIS & Working at Heights Certified, Class 5 Driver's License
- Activities/Interests:** Musician, computer builder, amateur audio production, longsword fencing, outdoor enthusiast (hiking, cycling, kayaking), theatre and visual arts, landscaping and construction for family and friends