



# 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.

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## 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

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## WORK EXPERIENCE

### Production Crew – MRG Live

Mar 2022 - Present

*Various Sites Across BC*

- Installed and operated lighting, staging, and PA systems for live events
- Assembled festival infrastructure including tents, signage, seating, and décor
- Resolved technical/logistical issues on show days and acted as point-of-contact for organizers and artists
- Operated 5-ton trucks; loaded/unloaded gear and equipment safely and efficiently
- Ran live sound for side stages and built temporary display structures

### Exterior Maintenance Technician & Team Lead – Rotban Ultra Cleaning

Apr 2020 - Aug 2022

*Coquitlam, BC*

- Operated and maintained gas-powered pumps and equipment
- Led safety training and supervised job site operations
- Conducted chemical handling and cleaning of building exteriors using boom lifts

### Driver & Operations Manager – A&B Simple Logistics Ltd

Feb 2018 - Mar 2020

*Surrey, BC*

- Oversaw daily logistics operations and minor vehicle maintenance
- Delivered and assembled customer furniture; modified setups to meet client needs
- Developed CRM processes and trained new staff

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## 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*)

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## 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