

BEN CLAYDON, MECHANICAL ENGINEERING STUDENT

18 Discovery Ridge Manor SW Calgary, AB Phone: 403 519 8525 Email: ben@claydon.ca

EDUCATION

Bachelor of Engineering in Mechanical Engineering (BEng)
University Of Victoria, Victoria, BC.

September 2022 – Present

COMPETENCIES

- **Problem Solving** – Used timed testing and kinematics equations to solve for the braking force of a provided brake function in autonomous vehicle software when faced with the problem that no information was provided on the function.
- **Attention to detail** – As an intern, identified previously unnoticed calculation errors in spreadsheet data and proposed a solution to fix them.
- **Natural leader** – Frequently perform leadership roles and project management duties in group and club work by setting up communication channels, delegating tasks, and collaborating with members to help them complete their tasks independently.
- **Technical proficiency** –SolidWorks; MATLAB; Bluebeam; Linux (Ubuntu) OS; ROS 2; Docker; Coding in C, C++, VBA; MS Excel; MS Word; Adobe Acrobat; AutoCAD (introductory).

WORK EXPERIENCE

Co-op Student

June 2025 – Dec 2025

Sequoia Environmental Remediation, Calgary, AB

- Performed hands on assistance with manufacturing and maintenance of environmental remediation equipment involving mechanical and electrical systems.
- Redesigned a pump control system to incorporate a voltage boost converter to allow for pumping from greater depths.
- Designed and 3D printed: a detailed model of a chemical injection system for marketing conferences, a handheld mount for a GPS transmitter and antenna, and a mounting/shielding device for an infrared transmitter.
- Created SolidWorks design and engineering drawings for a custom air purification system tailored to client needs. Learned image rendering (as an after-hours project) to generate realistic images of the design. Performed design updates remotely after coop end date to accommodate unanticipated design changes.

Co-op Student

May 2024 – Aug 2024

RJC Engineers, Victoria, BC

- Designed a VBA script, accompanied by an instruction manual to automatically format 10-page meeting minute reports, resulting in a 30% reduction in editing time.
- Created a three-stage process roadmap for funding program applications on behalf of RJC clients.
- Implemented the use of a DJI mini 4 drone to capture aerial images for roof assessments, saving the time and cost of accessing roofs to manually take photos.
- Created a 3D interactive photo map of the Victoria Parliament Buildings.
- Used advanced Excel formulas to automate spreadsheet generation in large 40-sheet documents.
- Performed on-site assessments of roof structures and building enclosures.
- Conducted air tightness testing and water penetration testing on buildings.
- Communicated with clients and contractors in construction meetings to manage progress of ongoing construction projects.

Summer Student/ Junior Technician**May 2023 – Sep 2023****EnviroSearch Ltd., Calgary, AB**

- Operated peristaltic pumps, inertial pumps, and a digital multimeter to obtain groundwater samples and field parameters from contaminated sites across rural Alberta, in adherence to standard operating procedures.
- Developed and facilitated a well-repair project across 20 sites.
- Proposed and implemented a new method of calcium peroxide cell deployment to improve remediation of wells with changing water tables.
- Created technical reports, groundwater & soil tables, work summaries, relative percent difference tables, and photo logs in Microsoft Word and Excel.

DESIGN TEAM – CONNECTED AND AUTONOMOUS VEHICLE CLUB**Club Vice President & Team Leader****September 2024 – Present**

- Managed a design team of graduate and undergraduate students that converts remote-controlled 1/10 scale cars to autonomous driving vehicles and competes in racing competitions.
- Initiated a club restructure to improve technical progress and member engagement.
- Developed a reactive algorithm that continuously computes and publishes the desired steering angle and speed of the car based on lidar input.
- Developing a SLAM (Simultaneous Localization And Mapping) algorithm that generates a map of the course based on lidar data and computes the optimal racing line for the car to follow.

Team Member**June 2024 – August 2024**

- Received a promotion to team leader by sharing ideas and contributing to team success.

PERSONAL DESIGN PROJECTS

- Architectural Coffee Table, Collapsible Wooden Stools, 10'x10' Hot Tub Pad, AI powered guitar effect generator (in progress).

INTERESTS, HOBBIES

- Outdoor Activities - Freestyle Skiing, Hiking, Surfing, Climbing
- Musician – Play guitar & bass guitar in live shows and small concerts as a member of a band.
- Sports- Founder of annual recreational squash tournament, captain/manager of intramural volleyball team

AWARDS

- Technical Excellence Award, Fall 2024 F1Tenth Autonomous Racing Challenge, IEEE Victoria Section
- Best Team Collaboration Award, 2024 F1Tenth Autonomous Racing Challenge, IEEE Victoria Section
- Technical Excellence Award, Summer 2024 F1Tenth Autonomous Racing Challenge, IEEE Victoria Section
- Champion Award, F1Tenth Autonomous Racing Challenge, IEEE Victoria Section
- Certificate of Achievement, Introduction to Probability and Statistics I, 2024, Dept. of Math & Stats
- Certificate of Achievement Calculus I, 2022, Dept. of Math & Stats
- University of Victoria Entrance Scholarship (John and Myrtle Tilley Undergraduate Scholarship)

CERTIFICATIONS

- Alberta Class 5 Drivers License
- First Aid Certification (expires 2026-05-06)
- H2S Alive Certification (expires 2026-05-05)
- WHMIS Certification (expires 2026-05-06)
- Energy Safe Canada Common Safety Orientation

REFERENCES

Kevin Keenan, P. Geol.
Vice President, Sequoia Environmental Remediation Inc.
(403) 862-4309, kevin@sequoiaenvironmental.com

Jason Guldin ASCT, GSC, RRO
Principal, RJC Engineers
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