

GORDON MCGINN

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Mechanical Engineering Co-op Student

SUMMARY

Third-year Mechanical Engineering (Co-op) student at the University of Ottawa with **3+ years** of experience **leading teams** and managing operations in production-focused, field-based environments. Training with **SolidWorks CAD**, **C**, **Micro-python**, and **Arduino** through student design projects, with a **track record of taking ownership** of safety, logistics, and quality on remote job sites. **Seeking a 12-month co-op** placement to apply design, technical, and leadership skills to real engineering problems beginning January 2027.

EDUCATION

Bachelor of Applied Science in Mechanical Engineering (Co-op)

Sept 2024 – Present

University of Ottawa — Ottawa, ON | Expected 2029

- **Project Manager** for multiple student design teams, leading projects through the full engineering design process (see Projects).
- Proficient in **SolidWorks CAD**; produced detailed technical documentation and replicated complex assemblies to fit tolerances.
- Coursework exposure to thermodynamics, kinematics, materials science, and advanced calculus.
- **1st Place**, uOttawa Engineering Student Society Junior Design Category — Seismic Structures (2025).

Bachelor of Science (Honours), Human Kinetics, Minor in Neuroscience

2016 – 2021

University of Guelph — Guelph, ON | Completed

- Developed strengths in **scientific writing**, quantitative research methods, and fundamental clinical lab techniques (chemical titration, EMG, ECG, pulmonary testing methods).
- Held leadership roles in senior-year group projects and provincial-level **varsity athletics** (Rowing & Fencing).

TECHNICAL SKILLS

CAD / Design: **SolidWorks & OnShape** (part design, assemblies, schematics), **CSI SAP2000**, technical documentation, 3D printing, laser cutting, Microsoft Excel (BOM, Design Analysis), LoggerPro

Programming: C, Python, Arduino, basic data analysis

Shop / Field: Soldering, hand and power tools, heavy-equipment-adjacent fieldwork, **Advanced First Aid**

RELEVANT PROJECTS

Spy Crab Project — Mechanism & Assembly Lead

Winter 2026

- Led concept generation and design of the **inversion mechanism** for a biomimetic crab exploring linkage-based locomotion; produced the assembly schematic, **BOM**, and maintained the project Gantt chart throughout delivery.

Balsa Bridge Project — Team Lead & Analyst

Winter 2026

- Directed iterative structural member analysis, predicting failure load **within 2% of actual**; sized and validated a truss design to the allowable volume, cross-checking hand calculations against **CSI SAP2000** 2D models.

Weightlifting Hook-and-Brace Apparatus — Project Manager

Fall 2025

- Directed a design team through the engineering design process to create a gripping-assistance apparatus, balancing **ergonomics, durability, and ease of use**.

Security Access System — Project Manager & Cloud Storage Lead

Fall 2024

- Led a student team to build an API-integrated security application in Python — combining geofencing and administrator alerts to combat security breaches, with a secure **Google Cloud Storage Bucket** pipeline to store breach-response video for incident review.

WORK EXPERIENCE

Foreman, Next Generation Reforestation

Apr – Aug 2024, 2025, 2026

Beaverlodge, Alberta

- Led a **rotating crew of 6–14** tree planters daily, training incoming staff and maintaining quality through coaching, feedback, and block inspections (QC).
- Managed day-to-day site logistics and production planning, including scheduling around tight **helicopter-contract windows** for remote equipment transport.
- Monitored and enforced safe work practices, holding **stop-work authority**; completed daily hazard assessments and tailgate safety meetings.
- Served as **Advanced First Aid Lead Attendant (OFA)** — performed injury assessments, taping and management, and documentation; led camp-wide emergency drills.
- **Member of Joint Health & Safety Committee** – debriefed recent events and discovered hazards; reviewed protocols.
- Selected to co-lead a two-week **seismic line reclamation project** in Fort McKay, AB, serving as communications lead across remote teams, and coordinator with the project manager/helicopter contractor.