

Laird Scabar

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EDUCATION

University of British Columbia

Bachelor of Applied Science — 1st Year

Vancouver, BC

Sept. 2025 – Apr. 2030 (Expected)

TECHNICAL SKILLS

Mechanical Design: CAD (SolidWorks), DFM, DFA, FEA, GD&T, Prototyping

Manufacturing: 3D-Printing, CNC, Machining (Mill, Lathe, Band Saw, etc.)

Analysis & Programming: MATLAB, Python, C/C++, OpenCV, HTML/CSS, Git

Certifications: Certified Solidworks Design Associate (CSWA)

EXPERIENCE

SUBC - UBC's Submarine Design Team

Sept 2025 – Present

Drive Train Sub-team Member

Vancouver, BC

- Designed mechanical components and assemblies in SolidWorks, producing manufacturable CAD models and drawings for a human-powered submarine.
- Ran FEA simulations to evaluate stress, deformation, and safety factors, informing design improvements and material choices.
- Prepared parts for CNC manufacturing using tolerancing, fit checks, and design-for-manufacture principles.
- Supported drivetrain and subsystem integration through iterative prototyping, testing, and cross-team collaboration.

Film & Television Acting

2015 – 2025 (on pause)

Professional Film & Television Actor

- Performed in professional film and television productions broadcast by CBC, Netflix, and Disney, working in fast-paced studio environments.
- Collaborated with directors, producers, and multidisciplinary crews to deliver consistent on-camera performances under strict production timelines.
- Developed strong communication, adaptability, and presentation skills through scripted and improvisational screen work.
- Balanced long-term acting commitments with academics, demonstrating professionalism, time management, and reliability.

PROJECTS

Gearbox Side Plate & Step-Down Collar | SolidWorks, FEA, CNC, DFM

October 2025

- Designed and optimized a drivetrain gearbox side plate from sketch to CAD model to manufacturing, reducing weight while maintaining structure.
- Conducted stress and deformation analysis (FEA) to guide material removal and improve strength-to-weight performance.
- Generated CNC-ready manufacturing drawings to effectively handoff design to the machinist.
- Co-designed and manufactured a custom step-down collar to adapt a smaller output gear, restoring drivetrain compatibility and preventing misalignment.

Autonomous Robotic Claw | C++, SolidWorks (Sheet metal), Rapid Prototyping

January 2026

- Designed and fabricated an automated robotic claw capable of detecting and grasping objects using an ultrasonic sensor and servo-driven mechanism.
- Programmed Arduino micro-controller in C++ to implement distance-based actuation logic, enabling autonomous object pickup without manual control.
- Produced technical engineering drawings and dimensioned CAD documentation following standard drafting practices.
- Integrated mechanical, electrical, and software subsystems, troubleshooting sensor noise, servo calibration, and timing issues.