

Olivia Verge

Biomedical Focused Mechatronics Engineering Student
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Education

Memorial University of Newfoundland

Sept. 2024 – Apr. 2029

Bachelor of Engineering, Co-op Program (Mechatronics)

St. John's, NL

- VP Jr. Academic, Memorial University Engineering Society 'B'
- Mechatronics Class Representative (Class of 2029) & Student Mentor

Experience

Mysa

Jan. 2026 – May 2026

Hardware Product Engineer (Co-op)

St. John's, NL

- Engineered a Python-based automation script leveraging Cursor AI to programmatically generate STL and STEP files, resulting in a 30% reduction in manual CAD modeling time for fasteners.
- Managed product life cycles via Arena PLM, executing 15+ ECOs and maintaining complex BOMs to ensure 100% certification readiness for hardware releases.
- Accelerated new product introduction (NPI) by leading hands-on prototyping with SLA/FDM printers and conducting cross-functional product reviews.
- Collaborated with cross-functional teams to maintain documentation and contribute to accurate product releases.

Wooden Walls Distilling

May 2025 – Aug. 2025

Process Automation Intern

St. John's, NL

- Designed and proposed automation for motorized valves and sensors, to increase distillation efficiency by 15%.
- Developed real-time monitoring workflows for temperature and pressure signals to optimize system performance and technical documentation accuracy.
- Collaborated on component sourcing and multi-disciplinary engineering workflows to streamline production output.

Projects

ClearHead: Concussion Risk Monitor | ROS2, Python, WebSockets

Mar. 2026 – Apr. 2026

- Architected a ROS2 pub/sub suite to process 6-DOF IMU telemetry and detect high-risk biomechanical impacts.
- Developed a JavaScript dashboard with a custom WebSocket bridge for live sensor telemetry and automated alerts.

PostureGuard: Biometric Computer Vision App | Python, OpenCV, MediaPipe

Feb. 2026 – Mar. 2026

- Developed a cross-platform application for real-time biomechanical monitoring using MediaPipe pose estimation, achieving high-accuracy slouch detection.
- Implemented personalized baseline calibration and geometric landmark analysis for classification of spinal alignment.
- Integrated asynchronous notifications and system tray execution for macOS and Windows.

Adaptive Accessibility Controller | CAD, 3D Printing, Electronics

Jan. 2025 – Apr. 2025

- Engineered a custom one-handed Nintendo Switch controller by rewiring electronics in a custom-modeled enclosure.
- Utilized human-centered design and iterative prototyping to deliver a functional solution for limited-mobility users.

Technical Skills

Design & Engineering: SolidWorks, ROS2, Arena PLM (BOMs/ECOs), NPI Processes, Circuit Analysis

Software & Libraries: Python, C++, OpenCV, MediaPipe, MATLAB, SQL, Docker, Git, GitHub

Hardware & Control: 6-DOF IMU Integration, Arduino, P-Spice, Sensor Fusion, Soldering, SLM & FDM Printing

Professional: Project Management, Distributed Systems, Technical Documentation, English & French (Fluent)

Involvement & Interests

Community: Relay For Life Volunteer & Organizer; Regular Blood Donor (Canadian Blood Services).

Athletics: Competitive Hockey Player; Avid Hiker and Athlete.

Mission: Passionate about the intersection of software and human health, and improving accessibility.

To learn more about me, visit my portfolio at [oliviabevverge.github.io](https://github.com/oliviabevverge)