

JOCELYN LIM

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EDUCATION

University of Waterloo - Mechatronics Engineering

📍 Waterloo, ON 📅 2020 - 2026

- Varsity Women's Rugby
- EngHack Marketing Director, EngSoc Novelties Director

SKILLS

- **Tools:** SOLIDWORKS, Simulink, AutoCAD, Xilinx, Microstation, Ignition, PLC, Adobe Creative Cloud, GD&T, Git, LaTeX, Vim
- **Programming:** C++, C, Python, C#, Java, Matlab, HTML5/CSS, Microsoft Visual Basic
- **Languages:** English (Native), French (B2)

PROJECTS

Breast Force

📍 Waterloo, ON 📅 2025

- Researched, designed, and prototyped a pneumatic dynamic-support sports bra using soft actuators.
- Completed electrical calculations, component selection, and validation to ensure reliable actuation under dynamic loading.
- Developed full SolidWorks CAD models, performed mechanical analyses, built electrical schematics, and integrated subsystems into a functional proof-of-concept prototype.

EXPERIENCE

enVgo - Mechatronics Engineer

📍 Waterloo, ON 📅 Jan 2025 - May 2025

- Designed and implemented an LV power system in **KiCad**, sourcing parts based on power needs and industry regulations
- Assembled waterproof electrical systems in confined spaces, performing high-reliability wiring, crimping, and soldering
- Integrated **NMEA** displays to interface with onboard systems, enabling seamless user control of entertainment and navigation

Red Bull Powertrains - ERS Control Systems Engineer

📍 Milton Keynes, England 📅 Jul 2023 - Jun 2024

- Worked in a fast paced **Formula 1** environment to develop the energy recovery system for the 2026 Red Bull power unit
- Used **SIMULINK HDL Coder** to convert a full **FPGA** motor model to fixed point, reducing resource allocation by 60%
- Used **SIMULINK** to introduce new features increase simulation accuracy in a PMSM motor model running on a HiL machine
- Implemented XCP protocols over UDP to create a **C++ DLL** to send calibrations to an ECU through a **C# Excel AddIn**

Virtek Vision - Hardware Engineering

📍 Waterloo, ON 📅 Sept 2022-Dec 2022

- Designed and modelled parts to be machined and 3D printed for high precision laser machinery using **SOLIDWORKS**
- Rapidly designed and prototyped different solutions to product issues that arose in testing to meet strict deadlines
- Created technical drawings using GD&T standards for parts to be machined and 3D printed used for IRIS technology

Hatch Ltd - Electrical/Control Automation Engineer

📍 Sudbury, ON 📅 Jan 2022 - Apr 2022

- Performed various electrical calculations for equipment sizing and created excel calculators based upon the OESC
- Used AutoCAD and Microstation to create SLDs, PIDs, layout diagrams and wiring diagrams of a large electrical network
- Coded automated and manual procedures for mining machinery through the use of ladder logic and **PLC programming**
- Created user facing interactive HMI windows to control and monitor a network of mining process systems using **Ignition**

WATERLOOP - Braking and Thermal Management Engineer

📍 Waterloo, ON 📅 May 2021 - Present

- Developed designs for a lightweight and low heat braking system integrated with the guidance system on a Hyperloop pod
- Researched and developed different liquid cooling methods for thermal management of a Linear Induction Motor
- Created 3 iterations of different concept render designs of a carbon fibre shell using **SOLIDWORKS Visualize** and **Blender**

WATonomous - Sensor Mounting Engineer

📍 Waterloo, ON 📅 Jan 2021 - Jun 2021

- Designed a water resistant 3D printed enclosure to be mounted on vehicle using **SOLIDWORKS** with a press fitted lid
- Enabled a sensor network to capture data with minimal noise from air resistance, vibrations and external elements
- Worked on a design team to create a **level four fully autonomous vehicle** to compete in a four year SAE competition

Veriday - QA Analyst

📍 Mississauga, ON 📅 May 2021 - Aug 2021

- Designed and created 7 interactive and user friendly websites for financial advisors in under 3 months using **HTML/CSS**
- Provided front end support to users of a marketing platform by quickly responding to requests through Jira and Zendesk