Roy Suliman

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Technical Skills

Mechanical	Software	Electrical
• 3D Printing & Prototyping • Vibration & Structural Dynamics • Troubleshooting & Repairing • Thermodynamics & Heat Transfer	• CAD (Creo, SolidWorks, CATIA) • Structural Analysis (ANSYS) • Drawings, GD&T • MATLAB, C++, Simulink, LabVIEW • Windchill PDM, JIRA	• Soldering • Control Systems Design • Digital Logic • Digital Signal Processing

Technical Work Experience

French Immersion – Odyssey Program Sept 2025 – Present
École secondaire de La Seigneurie, Québec City QC

- Support secondary students in developing English communication skills in a French-speaking environment
- Integrate simple STEM/engineering activities (beginner programming & robotics) to encourage interest in engineering concepts

Product Engineering / Analysis Engineering Jan 2023 – Feb 2024
Westport Fuel Systems (now Cespira), Vancouver, BC

Analysis Engineering Co-op

- Conducted FEA on fuel delivery components using ANSYS, increasing primary frequency from 286.47 Hz to 350.52 Hz
- Developed and validated models for rails and pipes, incorporating a p-clamp to enhance stability by 22.4%
- Authored detailed monthly technical reports summarizing methodologies, results, and recommendations
- Collaborated with cross-functional teams to integrate simulation insights, contributing to project milestones

Product Engineering Co-op

- Conducted a risk assessment for a proposed design change, increasing the number of gas spray holes in a fuel injector from 9 to 15, while evaluating the impact on wall thickness and overall injector safety
- Analyzed an existing fatigue study to assess the safety of the reduced wall thickness, using pressure data to verify the design's structural integrity
- Presented findings to stakeholders via a comprehensive technical report, demonstrating that the reduced wall thickness would not compromise performance based on fatigue study results

Technical Work Experience (Continued)

R&D Engineering Co-op & Mechanical Lead Jan – Aug 2022
Healthcare Systems R&A Inc, Surrey, BC

- Developed an EEG headset design that is accessible to individuals and institutions in the medical field by implementing design ideas in a prioritized order
- Led a team of 4 members and improved team performance by clarifying tasks for each member and ensuring all team members are on track with project deliverables
- Fixed design errors by fully defining sketches and troubleshooting errors from sketches and features to prevent any problems when editing parts
- Ran FEA simulations on designs to ensure that parts meet the design requirements

Technical Projects

Capstone Project: Bilateral Control of Master-Slave Manipulator Jan – Aug 2024

- Designed and implemented a teleoperation control system using Quanser linear setups, achieving real-time feedback and precise synchronization between master-slave devices
- Designed & 3D-printed a custom system, integrating an ESP32 microcontroller programmed in C, achieving $\pm 1^\circ$ accuracy in displacement tracking
- Developed control algorithms in Simulink and utilized TCP/UDP protocols, achieving low-latency wireless communication with a time delay of < 200 ms
- Integrated haptic feedback, improving user experience and operational accuracy for remote manipulation tasks in real-time
- Presented the system at a university demo day, earning recognition for its potential applications in remote environments and industrial automation

Venture Project: Far-UVC Technology Sept 2022 – Feb 2023

- Partnered with IUVOX to expand its operations by proposing “Ero,” a Far-UVC Produce Treatment system targeting fruit and vegetable waste, addressing an over $20 billion food waste industry challenge
- Conducted over 20 customer interviews to validate hypotheses about the food supply chain, uncovering insights into market demand and potential barriers to adoption

Education

Mechatronic Systems Engineering, B.A.Sc. Sept 2020 – Oct 2025

- Simon Fraser University, Surrey, BC
- CGPA 3.74

Explore Program – Université Laval, Québec City, QC May – July 2025

- Intensive French immersion (120+ hours) focused on communication and cultural integration

Odyssey Program (Official Languages Program), Québec City, QC Sept 2025 – Present

- Serving as an ESL Language Monitor in francophone classrooms while completing nine months of cultural and language immersion

Languages

- English – Fluent
- French – Intermediate
- Arabic – Fluent

Interests

- Cycling, Horseback Riding, Aleppo Soap Making, and Personal Finance