

LIAM QUAN

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EDUCATION

University of British Columbia

Bachelor of Applied Science - Mechanical Engineering

- **Activities and Societies:** UBC Baja SAE, Dean's List

Vancouver, BC

Sep. 2025 - May 2030

PROFESSIONAL EXPERIENCE

UBC Geering Up

Engineering Outreach Facilitator

Surrey, BC

May 2026 - Aug. 2026

- Facilitated and led mobile STEM workshops across lower mainland BC for students in grades 2-10.
- Taught weeklong engineering summer camps for students in grades 1-12,
- Presented and taught fundamental concepts in accessible and appropriate formats to a variety of ages.
- Organized materials, planned lessons, managed classes of up to 25 students, and resolved conflicts between campers.

Oxford Learning

Academic Tutor

Surrey, BC

Aug. 2024 - Jul. 2025

- Tutored students in grades K-12 in Math, Physics, Chemistry, French & English.
- Offered personalized coaching for students with behavioural & cognitive exceptionalities with an emphasis on developing independent problem-solving strategies.
- Planned lessons, assigned homework, and consistently managed up to 3 students learning separate subjects at once.

EXTRACURRICULAR EXPERIENCE

UBC Baja SAE

Suspension Team Member

Vancouver, BC

Sep. 2025 - Present

- Contributed to the design, manufacturing, and testing of a single seat offroad vehicle, raced at University Baja SAE's annual competitions.
- Assisted in the manufacturing and repair of crucial suspension components such as controls arms, radius rods, jigs, etc.
- Volunteered as event staff at Epreuve du Nord Baja competition, helped safely redirect crashed vehicles back onto the race track.

TECHNICAL PROJECTS

Upper Control Arm, UBC Baja SAE

Sep. 2026 - Present

- Currently leading the research, design, and manufacturing of a tubular upper control arm using SolidWorks weldments.

Anti-Roll Bar Tabs, UBC Baja SAE

Feb. 2026 - Apr. 2026

- Parametrically designed sheet metal tabs to integrate a rear anti-roll bar (ARB) to our Baja vehicle's chassis using SolidWorks.
- Optimized weight reduction by iterating sheet metal thickness while ensuring acceptable FOS, simulated with Ansys Mechanical.
- Presented initial design and manufacturing plans to a multidisciplinary team of 70+ members, then implemented constructive feedback to improve manufacturability (DFMA).

Upper Control Arm Jig, UBC Baja SAE

Sep. 2025 - Nov. 2025

- Designed sheet metal jiggling in SolidWorks to secure a carbon fibre tube and CNC aluminum hybrid upper control arm while epoxy resin hardened.
- Accounted for manufacturing tolerances before water jetting and welding to ensure accuracy.

Autonomous Claw, APSC 101

Jan. 2026 - Feb. 2026

- Designed and assembled an autonomous retrieval device using Arduino, servo, and ultrasonic sensor.
- Wrote and debugged C/C++ code to program servo response timing to distance readings from an ultrasonic sensor.

TECHNICAL SKILLS

Engineering Software: SolidWorks, OnShape, MATLAB, Ansys Mechanical, C/C++, MS Excel

Machining & Manufacturing: Lathe, Mill, CNC, 3D Printing, Waterjet, Press Brake, Power Tools

Certifications: SolidWorks Design Associate (CSWA), MATLAB OnRamp, DELF B2, Emergency First Aid