

Luke Huang

Calgary, AB | 587-500-6748 | Lukehuang27@gmail.com | lukehuang.dev

EDUCATION

University of British Columbia

Vancouver, BC

Bachelor of Applied Science in Mechanical Engineering

Expected Apr 2028

- Relevant coursework: Solid Mechanics, Engineering Dynamics, Materials Science, Electrical Circuits, Engineering Calculus, Thermodynamics, Fluid Mechanics

EXPERIENCE

Engineering & Technology Intern

May 2026 – Present

Baker Hughes - Artificial Lift

Leduc, AB

- Configured **ESP systems** for SAGD and conventional applications, using proprietary system-design software to evaluate **efficiency**, component compatibility, well conditions, and client requirements across 20+ systems **averaging over \$200K per unit**
- Designed and revised **CAD models** and **2D drawings** for transportation-related components, incorporating **dimensions and tolerances** to support manufacturing, design review, and engineering documentation
- Supported reliability investigations through **teardown analysis** of field-returned ESP systems, identifying **failed components** and documenting failure mechanisms in **customer-facing reports**

Firmware Team Member

Jan 2025 – Sep 2025

Open Robotics Student Team

Vancouver, BC

- Developed and optimized **embedded C/C++ firmware** to ensure reliable communication between sensors, actuators, and control systems
- Contributed to documentation and open-source repositories to support knowledge-sharing and community collaboration

PROJECTS

4-DOF Robotic Arm

Jun 2026 – Present

- Designed a 4-DOF robotic arm from scratch in **CAD**, developing custom 3D-printable links, joints, gripper, base, and mounting features while considering torque, reach, payload, and assembly constraints
- Planned **OpenCV-based computer vision** features for object detection, tracking, colour recognition, and pose estimation to support future pick-and-place and human arm motion imitation

Remote Controlled Firetruck

Jan 2026 – Apr 2026

- Designed and built a competition-ready RC car from scratch, including **custom steering and braking mechanisms**, supported by MATLAB-based speed and braking distance calculations
- Developed CAD models and fabricated components using **waterjet cutting and milling**; prototyped and tested to verify competition performance specifications
- Designed and integrated a water storage, pumping, and directional spraying system capable of delivering targeted fire suppression in emergency response scenarios

Magnetic Levitation Project

Aug 2025 – Oct 2025

- Modeled and drafted the full magnetic levitation assembly in CAD; performed tolerance stacks, fastener/material selection, and produced **ASME Y14.5 GD&T drawings**
- Machined and assembled parts to tolerance using mill/lathe/drill press and soldered the control PCB

Facial Recognition Project

Sep 2023 – Apr 2024

- Built a facial recognition program using **AWS Rekognition** capable of identifying individuals in group photos
- Applied the system to a **proof-of-concept** automated attendance workflow for classroom use

TECHNICAL SKILLS

Programming & Data Analysis: Python, C/C++, MATLAB, SQL, R, HTML, Excel, Power BI, Git

CAD, Design & Engineering Analysis: SolidWorks, ASME Y14.5 (GD&T), FEA, DFM/DFA, Root Cause Analysis

Manufacturing, Prototyping & Testing: 3D Printing, Waterjet, Mill, CNC, Lathe, Drill Press, Soldering, Oscilloscope, Multimeter