CHRISTOPHER LAM

clbears@student.ubc.ca · (925) 519-7632 · Pleasanton, CA

EDUCATION

University of British Columbia — Vancouver, Canada   *Sept 2025 – Present*
B.A.Sc., Engineering (Engineering Physics focus)
   Key Coursework: PHYS 159 (Experimental Physics Lab), PHYS 158 (Electricity, Magnetism & Optics), PHYS 157 (Thermodynamics, Oscillations & Waves), APSC 160 (Engineering Computation), APSC 100 (Engineering Design)

Foothill High School — Pleasanton, CA   *Aug 2021 – May 2025*
Diploma, GPA: 4.25
   Key Coursework: AP Physics C: Mechanics & E&M, PLTW Digital Electronics, PLTW Computer Integrated Manufacturing (CAD/CAM, CNC), PLTW Principles of Engineering

ENGINEERING PROJECTS

Custom LED Desk Lamp   *Independent Project*
- Designed and built a functional desk lamp integrating a spring-balanced mechanical arm with a custom analog LED driver circuit (3000K COB, analog dimmer); combined mechanical design with circuit engineering

COVID-19 Emergency PPE Production   *Pleasanton, CA, 2020*
- Manufactured and distributed 3,500+ 3D-printed face shields to first-responder organizations; iterated on production workflow to maximize throughput; recognized by NorCal Ambulance

Mousetrap-Powered Vehicle — 1st Place   *Foothill High School*
- Engineered an original design using lightweight metal wire frame (50% weight reduction), rubber-band torque normalization, and balloon-friction wheels; outperformed entire junior class cohort

3D Printer Build & Fabrication   *Independent Project*
- Assembled and calibrated a large-format FDM 3D printer from components; designed and prototyped functional CAD models for personal and community projects

LABORATORY EXPERIENCE

PHYS 159 – Experimental Physics Laboratory   *UBC, Jan 2026 – Present*
- Designed experiments using CERT methodology for standing wave analysis; performed uncertainty propagation, oscilloscope measurements, and systematic data collection

LEADERSHIP & ACTIVITIES

Scouts BSA Troop 941 — Senior Patrol Leader & Eagle Scout   *Pleasanton, CA*
- Elected leader of a 100-member troop; directed meetings, outings, and training. Eagle Scout Project: designed and led installation of a public bicycle repair station with 15+ volunteers
- Northern Tier High Adventure: Led crew on a 50-mile canoe expedition; navigated a thunderstorm crisis requiring real-time decision-making under wilderness constraints

Student Filmmakers Association — President   *Foothill High School, 2024 – 2025*
- Led weekly club meetings; coordinated short film production, cinematography workshops, script development, and merchandise design

WORK EXPERIENCE

In-N-Out Burger — Store Associate   *Pleasanton, CA, 2022 – 2025*
- Delivered high-quality service in a fast-paced environment; maintained precision and consistency standards under sustained pressure

SKILLS

Engineering Tools: Autodesk Inventor, Fusion 360, Arduino, CAD/CAM, 3D printing (FDM), CNC machining, laser cutting, soldering, oscilloscope
Digital Electronics: Circuit logic design, Boolean algebra, K-maps, breadboarding, Multisim simulation, troubleshooting
Programming: Python, Arduino C
Lab & Research: Uncertainty propagation, CERT experimental design, measurement systems, materials testing, prototyping
Languages: Japanese (conversational, 3 years)
Interests: Hiking (Mt. Whitney, Mt. Fuji), photography, design, film