

Benjamin Lee

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EDUCATION

University of British Columbia - BAsc Mechanical Engineering

Apr 2026

Mech Eng. Undergraduate Society Grade Representative

Relevant coursework: Mechanics of Materials, Dynamic Systems and Vibrations, Fluid Mechanics, Electrical Circuits, Material Science, Thermodynamics, Heat Transfer, Computational Methods

EXPERIENCE

Kardium Inc., Burnaby, BC

Manufacturing Engineer Intern

May 2024 – Sept 2024

- Designed and introduced a new hydrophilic dip coating cleaning process, overseeing the design and qualification to decrease the current process time by 75%.
- Assembled mechanical/electrical assemblies for facility expansion, demonstrating proficiency in understanding mechanical drawings, solid models/assemblies, and electrical schematics.
- Conducted time studies on the manufacturing line, analyzing and optimizing process efficiency to meet ramping production targets.

Escape Trailer Industries, Chilliwack BC

Manufacturing Engineer Intern

May 2023 - Dec 2023

- Contributed to the successful launch of a new product line (Escape 23) by coordinating prototype builds with CAD software (OnShape), conducting feasibility studies, and overseeing the transition to full-scale production.
- Implemented Lean Manufacturing principles and introduced CNC manufacturing methods on production line, resulting in a 60% reduction in production cycle time.
- Utilized Six Sigma methodologies and Root Cause Analysis to identify and eliminate defects, reducing nonconformance by 40%.

UBC Uncrewed Aircraft Systems Design Team, Vancouver, BC

Mechanical Payload Member

Sep 2022 - Present

- Designed and conducted FEA analysis in SolidWorks/OnShape to reduce aircraft fuselage internal structure by 20%.
- Configured and manufactured fuselage exterior shell and layup mold, performing carbon fiber layups to reduce exterior weight by 30%.
- Executed CFD and model wind tunnel analysis to optimize flight performance characteristics by 12%.
- Led onboarding of OnShape CAD software to new and returning members.
- Led fabrication and rapid prototyping efforts using 3D printing, laser cutting, waterjet cutting.
- Collaborated with multidisciplinary teams, ensuring seamless integration of mechanical components into autonomous systems.

PROJECTS

Bipedal Robot (Work in Progress)

- Designing an Arduino controlled two-legged robot that mimics the walking pattern of a human.

Titan Endurance Orbiter

- Designed an electro-mechanical system that launches an Arduino-integrated catapult on wheels at a controlled velocity, propelling a sphere towards a funnel.

SKILLS & INTERESTS

Fabrication: Lathe, Mill, CNC Router, Laser Cutter, Waterjet Cutter, 3D Printing (FDM/Resin), Laser Welding

Software: SolidWorks, OnShape, MATLAB, Arduino, Python