

Ethan Sun

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EDUCATION

University of British Columbia

Bachelor of Applied Science in Engineering Physics

- Co-op: Available for 4 months beginning Jan 2025
- CGPA: 88.4%

Vancouver, BC

Sept. 2024 - Present

TECHNICAL SKILLS

Applications: SolidWorks(CSWA), Matlab, Microsoft Excel, Arduino IDE, Davinci Resolve

Manufacturing: 3D Printing, GD&T, Wood Tools

Software: Java, C/C++, Matlab

Hardware: Oscilloscope, Multimeter, Arduino Uno

TECHNICAL PROJECTS

Three-Speed Planetary Gearbox with Overdrive | *SolidWorks, GD&T, 3D Printing*

Aug 2025

- Designed and prototyped a comprehensive 3-speed planetary gearbox with selectable gear ratios and overdrive mode
- Developed complete CAD assemblies with exploded views, global variables, and design intent-driven modeling
- Applied tolerancing principles (press and sliding fits) and introduced GD&T for professional drafting standards
- Fabricated parts via FDM 3D printing, iterating to verify assembly fit and demonstrate motion of all gear stages
- Created detailed engineering drawings to document components, assemblies, and design trade-offs

CAD Solid Modeling Portfolio | *SolidWorks, Engineering Drawings*

May 2025 – Present

- Created a personal portfolio of over 400 fully defined 3D parts and assemblies using SolidWorks
- Applied design intent, proper feature sequencing, and parametric modeling techniques to ensure robust geometry
- Produced detailed 2D engineering drawings with proper dimensioning, tolerancing, and exploded views
- Modeled real-world components including gears, brackets, enclosures, and fastener assemblies

Custom 3D Printed Components | *SolidWorks, Bambu A1, PLA/PETG*

June 2025 – Present

- Designed over 20 unique parts in SolidWorks, including structural brackets, cable organizers, mechanical mounts, and decorative models
- Printed and tested models using FDM printing techniques with PLA and PETG filaments on a Bambu A1 printer
- Optimized CAD designs through iterative prototyping to improve dimensional tolerance, strength, and printability
- Gained hands-on experience in additive manufacturing workflows, including slicing, bed adhesion, and print troubleshooting

OTHER EXPERIENCE

Beyond Business — External Relations Manager

Oct 2022 – June 2023

Burnaby Central Secondary School

Burnaby, BC

- Organized and promoted the Beyond Business case competition, featuring 8 teams and over 70 student competitors
- Secured over \$2,500 in sponsorships from local businesses and organizations
- Coordinated 5 university professors and senior students to serve as competition judges

Chief Operating Officer

Aug 2023 – July 2024

- Expanded competition participation to include 14 teams and 120+ students across the lower mainland
- Supported sponsorship efforts that raised over \$1,000
- Led the recruitment and management of 6 university graduates and professors to serve as judges in the competition
- Designed and delivered “How to Case Comp,” a workshop introducing case study techniques to all participants

Snowplay Attendant, Mt. Seymour Resorts

Nov 2019 – April 2023

Mt. Seymour

North Vancouver, BC

- Delivered customer service to guests in high-volume outdoor recreational settings
- Maintained safety procedures and equipment setup in dynamic and fast-paced weather conditions
- Worked collaboratively with team members to coordinate snow tubing operations and ensure guest satisfaction