

Jacob Himmens (He/Him)

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PROFILE

Chemical & Biological Engineering student at UBC with hands-on experience in process engineering, technical bid development, programming, and experimental design. Completed UBC Engineering's Pre-Med Alternative Path and hold a BC Emergency Medical Responder licence. Excited to learn and apply engineering skills in real-world settings, contribute to challenging technical work, and continue developing as a hands-on learner.

EDUCATION

University of British Columbia Expected May 2029
Bachelor of Applied Science – Chemical & Biological Engineering

- Completed UBC Engineering's Pre-Med Alternative Path (PMAP), combining general engineering coursework with medical-school prerequisite courses.
- Available for any Co-op work term starting in May of 2027.

TECHNICAL SKILLS

CAD: Onshape, SolidWorks, AutoCAD

Programming: C++, C, Python, MATLAB, GitHub

Fabrication: FDM 3D printing, laser cutting

Certifications: Emergency Medical Responder (BC licence valid through October 2030); ROC-M; WHMIS; Naloxone Training & Conflict De-escalation

TECHNICAL WORK EXPERIENCE

Startec Compression and Process | Calgary, AB Summer 2026
Applications Intern

- Optimized engineering workflows by developing Excel- and Python-based tools, streamlining repetitive application engineering and bid-development processes.
- Automated recurring workflows using advanced Excel functions and process improvements, saving an estimated 500 engineering hours annually.
- Supported technical bid development by performing process simulations and analyzing operating conditions to inform equipment selection, costing, and client proposals.
- Sized and cost-estimated pressure vessels and distillation columns to support accurate equipment quotations and client bid packages.

ENGINEERING DESIGN TEAMS

UBC Rocket | Vancouver, BC September 2025 – Present
Payloads Engineering Member

- Designed and built an experimental payload to measure tubulin polymerization under reduced-gravity conditions using spectrophotometry and custom optical measurement systems.
- Developed and iterated mechanical components using AutoCAD and FDM 3D printing, rapidly prototyping and testing multiple designs to improve experimental functionality.
- Collaborated within a multidisciplinary engineering team to design, construct, and troubleshoot a viable scientific experiment for operation under reduced-gravity conditions.

TECHNICAL PROJECTS

- CO₂ and Oxygen Liquefaction | Personal Project

May 2026 – Present

 - Developed process simulations to evaluate the technical viability of small-scale CO₂ and oxygen liquefaction systems.
 - Used Symmetry process simulation software to model operating conditions, analyze process performance, and conduct preliminary cost assessments.
 - Explored process configurations and operating parameters to improve liquefaction efficiency and assess practical design trade-offs.
- Personal Website | Personal Project

October 2025 – Present

 - Developed and deployed a public website using AI-assisted coding tools to strengthen full-stack development and programming skills.
 - Applied prompt engineering and large language models (LLMs) to generate, debug, and refine website functionality.
 - Iteratively tested and improved AI-generated code to build a functional, user-facing web application.

EMERGENCY MEDICAL RESPONDER

- British Columbia Emergency Medical Responder Licence

Valid through October 2030

 - Completed EMR training in pre-hospital patient assessment, emergency medical care, trauma response, airway management, and team-based emergency response.
 - Developed practical experience applying structured patient assessments, communicating under pressure, and making time-sensitive decisions in simulated emergency scenarios.

VOLUNTEER EXPERIENCE

- WIC Business Case Competitions

2022 – 2025

Head of Junior Business Case Competitions

 - Created and executed a business case competition involving more than 110 students and 20 judges.
- Engineering Undergraduate Society

2025 – Present

 - Contributed to the student group responsible for maintaining the UBC engineering cairn and participated in first-year student elections.
- Big Brothers Big Sisters – Teen Mentorship Program

2023

 - Mentored younger students and supported community engagement and personal-development initiatives.

AWARDS

Business & Entrepreneurship Institute Certificate | West Island College | 2025
Engineering, Design & Technology Certificate | West Island College | 2025

PASSIONS & HOBBIES

Fly fishing • Hiking • Process engineering • Healthcare • AI & programming