

Curtis Ho, Undergraduate

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Portfolio - <https://curtisho3.github.io/portfolio/>

SKILLS SUMMARY

Budding Mechanical Engineer with an ever-evolving ambition in revolutionizing the transportation and energy sector.

- Mechanical: SOLIDWORKS and CATIA for CAD **Modeling and Rendering**, ANSYS Mechanical for Multi-force **FEA Analyses**, Blender **3D Animations**
- Electrical and Programming: Arduino for **IoT Integration**, Python with CrewAI and LangChain **Automation**, MATLAB for **Data Analysis**, C for **Programming**
- Machining: Lathe, Mill, Drill Press
- Others: QGIS, LLM Prompt Engineering, 3D Printing with Prusa and Ultimaker
- Soft Skills: Team Leadership, Adaptability, Curriculum Development

EDUCATION

Bachelor of Applied Science and Engineering in Mechanical Engineering + PEY Co-op 2024 – 2029

The University of Toronto, Toronto, ON

Intended Minors: Environmental Engineering and Robotics and Mechatronics

High School Diploma

2020 – 2024

Northfield Mount Hermon School, One Lamplighter Way, Gill, Massachusetts

Dean's List

AWARDS AND ACHIEVEMENTS

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|---|------|
| • MIT Health Hack Aging-in-Place Winning Team | 2021 |
| • NMH 3D Printed Car Derby Race Third Runner Up | 2021 |
| • The Cum Laude Society | 2023 |

Certifications

- Elementary Level of the International Tree Climbing Association
- Completion of Udemy's 100 Days of Coding Course

Volunteer Work

Ecological Researcher, Costa Rica Wildlife & Environmental Conservation Program 2023

- Conducted field survey on dolphin distribution, bamboo health, and Macaw population
- Studied locals' environment conservation techniques

Community Service in Shaoguan, China

2019

- Visited families of underprivileged high school students in Shaoguan, China to understand and report their needs

EXPERIENCE

ReGen Technology Holdings, Limited

Apr - 2025 to Aug - 2025

Engineering and Marketing Intern

- Worked on a project pioneering a solar-thermal desalination system that produces nutrient enriched irrigation ready fresh water
- Developed AI agentic workflow for automated email outreach to potential customers
- Prototyped 3D printed adjustable tilt-control mechanism for deployment desalination silos on uneven terrain

STEMpire Bridge

Jun - 2023 to Jun - 2024

Cofounder

- Co-founded a social enterprise, establishing a STEM tutoring service where we tutored students from Massachusetts' public high schools and charter schools in Python and 3D Modeling.
- Held weekly sessions with 8th grade students in class sizes of 8-12, introducing young minds to the possibilities of engineering.

Solar Man Air Conditioning, Limited

Jun - 2022 to Aug - 2023

Research Assistant

- Applied product design and animated Solar Man's revolutionary Personal Micro-Turbine A/C, implemented in its promotional campaign.
- Animated, fabricated, and tested Solar Man's inventions. One notable achievement was the creation of a patented air conditioning system that eliminates the need for ozone-depleting refrigerants, thanks to its innovative turbine design.
- Spearheaded a project focused on solar desalination of seawater with embedded energy generation. Modeled on Fusion 360 and animated on Blender.
- Took on the responsibility of managing the company's YouTube channel and building their website, due to the limited personnel in the startup. Grew the channel to 1.5k subscribers.

MIT Hong Kong Innovation Node

Jun - 2023 to Aug - 2023

Youth Fellow

- Led a talented team of high school students in the creation of several AI projects. One notable achievement was developing a music generation application using Chatbase and GPT.
- Collaborated with experienced medical students, accomplished doctors, and clinicians on a medical consultant chatbot. This chatbot was designed to assist users with screening and prevention of cancer and cardiovascular diseases, as well as address their vaccination concerns.
- Gained teaching experience during a short stint at St. Paul's Coed Summer Portal, a 2-week summer camp. Supported the instruction of MIT App Inventor and provided guidance to middle school students. Campers worked on projects focused on enhancing the Hong Kong tram riding experience.