

# Bhakti Chohan

Toronto, CA

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## Experience

### Structures Lead

Toronto, CA

University of Toronto Aerospace Team

September 2021 - Present

- Redesigned structural propulsion testing facility and test stand to safely accommodate and measure **30kN of direct thrust**.
- Designed, fabricated, and assembled **30' trussed launch rail** to withstand **10kN blast thrust**. Leading lift-mechanism redesign.
- Developed and integrated NO2 **quick disconnect fill system** with a detachment period of 1.2 seconds.
- Leading a team of 6 subsystem members, writing **4+ technical project documents** with launch requirements and deadlines.
- Successfully launched Canada's first-ever experimental hybrid rocket to 21,000 feet and Mach 1.3. **Led launch rail assembly** group.

### Airframe Member

Toronto, CA

University of Toronto Aerospace Team

Sept 2022 - Present

- Designed, tested and **assembled 5.5" filament winder** to accurately lay carbon fibre for composites manufacturing.
- Redesigning mandrel spinner to automate epoxy removal and heat shrink tape system, **saving hours of fabrication work**.

### Lab Engineer

Toronto, CA

Advanced Membranes Laboratory at the University of Toronto

May 2022 - Present

- 3D printed 30+ structural components, integrated with pressure systems at millimetre precision. **Iterative dimensional analysis**.
- Designed and implemented **robotic sampling system and controls** to automate reactions and save **4+ hours/day** of work.
- Built full-stack software and servo-electronic system to connect robotic sampler with a **GUI control interface**.
- Assembled 150 bar high-pressure reverse osmosis fluid system to be **15% more optimized** and efficient.

### Project Manager

Mombasa, KE

Borehole Development - Shree Satya Sai International Organization

Sept 2019 - April 2020

- Researched and led the technical drilling process of water-supplying boreholes for three children's homes in rural Kenya.
- Spoke at and organized multiple workshops and seminars on water disparity awareness across 5 towns.

### Engineering Intern

Mombasa, KE

City Engineering Ltd; General Cargo Services; United Clearing Ltd

May 2019 - Dec 2020

- Shadowed and learned from manufacturing engineers.
- Gained hands-on experience in manufacturing and galvanizing of industrial building materials.

## Education

### University of Toronto

Toronto, CA

Bachelor of Applied Science in Engineering Science

Sept 2021 - May 2025

- Major:** Aerospace Engineering.
- Minor:** Robotics and Mechatronics.
- Courses:** Structures and Materials, Thermodynamics and Heat Transfer, Vector Calculus and Fluid Mechanics, Electromagnetism.

## Skills

<b>Programming</b>	Python   C/C++   <b>MATLAB</b>   System Verilog   <b>Excel</b>   RISC-V Assembly
<b>Technical</b>	<b>CAD (SolidWorks, Fusion360, CATIA)</b>   3D Printing (Standard, Resin)   Arduino   Structural Analysis (ANSYS)   Composite Layup
<b>Certifications</b>	<b>Basic Machining License</b>   Level 1 High Power Rocket Launch Certification   First Aid + CPR/AED
<b>Comprehensive</b>	<b>Communication</b>   Team player   <b>Enthusiasm</b>   Documentation   <b>Adaptability</b>   Curiosity   Public Speaking   Leadership
<b>Languages</b>	<b>English (Native)</b>   Gujarati (Native)   Hindi (Fluent)   Swahili (Proficient)

## Achievements

2022	<b>First Place</b> , Launch Canada Competition, Advanced Category	Cochrane, CA
2022	<b>ESROP Research Grant</b> , Division of Engineering Science, University of Toronto	Toronto, CA
2021	<b>International Scholar</b> , Faculty of Applied Science and Engineering, University of Toronto	Toronto, CA
2022	<b>Dean's Honor List</b> , Faculty of Applied Science and Engineering, University of Toronto	Toronto, CA
2019-21	<b>Outstanding Academic Performance</b> , Oshwal Academy	Nairobi, KE
2020	<b>First Place</b> , Journey2Med Virtual Science Fair	International

## Volunteering and Activities

Tamarind Tree Foundation (2020-2021). **Juvenile Mentorship and Peer Counselling (2012-2021)**. Student Government (2015-2021). Model United Nations (2017-2020). School Debate Team (2013-2020). David Sheldrick Wildlife Trust (2019-2021).