

# MO TABAN

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## Skills Summary

Software: SolidWorks, MATLAB, ANSYS Workbench, Microsoft Office, Python

Manufacturing: 3D Printing, Milling Machine, Lathe, Drill Press, Hand Tools, Manual Assembly, Soldering, Carbon Fiber Composite Manufacturing

## University of Toronto – B.A.Sc. Mechanical Engineering

Expected Graduation – May 2026

Intended Streams – Mechatronics and Solid Mechanics

## Employment

### NDLG Bar & Café – Student Staff

July 2022-September 2022

- Oversaw and managed patio operations
- Assisted in the preparation of custom food and beverage orders

## Project Experience

### University of Toronto Formula Racing

September 2021-Present

#### Brake Design Lead

- Design an Autonomous System Brake (ASB) featuring a redesigned Emergency Brake System (EBS), improving driverless braking performance by 37.5%
- Redesign the brakes system to decrease pedal force needed for maximum deceleration by 12.5%
- Conducted Finite Element Analysis (FEA) on rotors to evaluate structural and thermal performance characteristics.
- Calculated braking torque, brake line pressure, caliper clamping force, and other parameters for various deceleration rates.
- Lead other members in the collaborative development of a brake system to achieve performance objectives.

#### Senior Aerodynamics Member, Senior Electric Powertrain Member, Recruitment Co-Lead

- Manufactured components for the UT23 Aerodynamics package using both Wet-Preg and Infusion layup methods with an emphasis on the part quality
- Assisted in mold manufacturing and preparation by sealing, priming, waxing, filling, and application of release agents onto molds of various materials (MDF, 3D Printed PLA, Fiberglass reinforced)
- Soldered components using a soldering iron onto PCBs for testing of the UT23 Battery pack
- Assisted in the assembly of a 546 Volt Custom Battery pack for UT23 while practicing high levels of safety
- Co-lead the recruitment cycle for the 2022-2023 season, introducing and integrating 475 recruits into the team

## Certificates

George Brown College - Basic Machining

Certified SolidWorks Associate – Mechanical Design

Smart Serve Certification