

# Eric Li

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Certified **SOLIDWORKS Professional in Mechanical Design** - Credential ID: **C-AFNQ52UR3P**

## EDUCATION

**Bachelor of Applied Science and Engineering (B.A.Sc), Mechanical Engineering**

Sep. 2021 – Apr. 2026

University of Toronto – Robotics and Mechatronics Minor, 3.9 CGPA, High Honors

- **Relevant Courses:** Machine Design, Control Systems, Materials Science, Mechanics of Solids, Analog & Digital Electronics, Fluid Mechanics, Robotics, Numerical Methods, Thermodynamics, Heat and Mass Transfer

## WORK EXPERIENCE

**Co-op, Mechanical Engineering Design and Drafting – Nutrien**

May 2023 – Aug. 2024

Saskatoon, Saskatchewan (Cory Potash Mine)

- Drove ~\$125,000 in cost savings on oversized brine piping installation by modeling a 4,500+ component personnel service headframe tower using Inventor and AutoCAD for slinging/rigging simulation.
- Led structural FEA on the column steel for a \$4,500+, 1-tonne wall-mount cantilever jib crane design, coordinating project management, procurement, and tradespersons discussions.
- Designed, modeled, and drafted a ~\$17,000 underground rehabilitation unit, ~\$15,000 belt conveyance headcovers, and a ~\$10,000 adjustable conveyor return-roller frame prototype, meeting union and Canadian mine safety regulations across **100+ km** of underground mine roads.
- Assembled 6000+ component ore hoist production headframe tower (Inventor and AutoCAD), used in mechanical simulation for a multi-million-dollar 2026 project forecast of an ore hoist bucket (skip) upgrade.
- 3D printed and assembled 1:100 miniature production headframe model, **permanently displayed on-site**.
- Drafted 6 professional AutoCAD slinging/rigging documentation drawings from field measurements for site and third-party contractor use regarding **any** large machinery imports into the mine.
- Modeled and simulated mechanical movement of advanced mining machinery for presentation involving the VP of the Potash Business Unit and executive safety committee overseeing all potash mine sites.

**Laboratory Engineering Intern – Infinity Testing Solutions**

Jul. 2022 – Sep. 2022

Mississauga, ON

- Built a Python/CSS/Figma GUI prototype for project tracking across 300+ active clients and **1,500+** instrumentation items.
- Aided in the assembly of a closed-loop 12,000 psi hydraulic intensifier cart controlled using **NI LabVIEW**.
- Helped with structural testing of 10+ guardrails, poles, and cement posts through controlled load fracture.

## DESIGN EXPERIENCE

**RSX (Robotics for Space Exploration) Rover Arm Team Member**

Sep. 2022 - May 2025

- Partially developed/assembled a 300+ component Mars rover robotic arm model, for use in electrical control testing with machined and custom 3D printed parts; in preparation for URC (35+ team competition) and CIRC.

**CanSat Competition Design Team Member**

Oct. 2022 – Apr. 2023

- Modeled and designed an outer satellite shell, heatshield deployment mechanism (+ 2 candidates) and mount using Fusion360, with system integration for PCB and battery components in a can-sized satellite design.

## SKILLS

**Analysis & Simulation:** FEA (ANSYS, Autodesk), MATLAB, LabVIEW, Minitab, SPICE, Excel

**Design & CAD:** SOLIDWORKS, FEA, ANSYS, Autodesk Inventor, Fusion360, AutoCAD, 2D Drafting, Revit, GD&T, DFM, PCB

**Industrial:** Servo Motors/Valves, Hydraulics, Arduino, Weldments, Lathe/Mill, Sheet and Structural Steel, Rigging

**Programming & Tools:** Python, C++, Java, HTML/CSS, Figma, UI/UX, Microsoft Office, Meridian