# Kristen Ho

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## EDUCATION

**University of Toronto** *Graduation Date: May 2027*

*Bachelor of Applied Science in Mechanical Engineering* SGPA: 3.70, CGPA: 3.40

- Minor in Sustainable Energy, Focus on Solid Mechanics and Energy & Environment
- Dean's Honour List

## WORK EXPERIENCE

**Kinectrics** **Toronto, ON**

*Nuclear Equipment and Tooling IMS Co-op Student* *May 2026 – August 2026*

- Supported the technical team on the Calandria Relief-Duct System Management (CRSM) project
- Designed and 3D-modeled a custom multi-level weight assembly system in SOLIDWORKS for a CRSM test mockup; created and released 2D manufacturing drawings to ISO 9001 and KIN standards
- Performed center-of-mass and tipping-point calculations to verify the safety and stability of the weight assembly
- Updated and released drawings for the full-scale CRSM mockup, including multiple coupon configurations, views, and high-level assembly instructions
- Designed and 3D-modeled an aluminum test frame for load-cell force measurement during scrape tool testing in SOLIDWORKS; produced manufacturing drawings, specified components, and supported procurement
- Designed and specified components for a pitot-tube airflow measurement assembly, including tubing, valves, fittings, and connections from McMaster-Carr to a differential pressure sensor, for the rush MCR4 outage
- Applied design-for-manufacturing and assembly principles, accounting for tooling access, assembly sequence, manufacturability, and procurement constraints for custom CRSM test mockups and test rigs
- Led CRSM procurement activities, including vendor outreach, supplier coordination, trades management, PREQ generation, and purchasing; managed incoming inspections and supported ISO 9001 quality compliance

**Kinectrics** **Toronto, ON**

*Overhead Lines LAM Co-op Student* *May 2025 – May 2026*

- Supported the mechanical testing and analysis of overhead lines and related transmission and distribution hardware
- Built a new water-ingression testing setup within two days using SOLIDWORKS and 3D-printed components, meeting client deadlines and supporting continuous improvement initiatives
- Designed a complete fiber optics kit for Kinectrics India, including custom attenuator enclosures, fiber spool covers, Pelican case layout, and precision shadow-cut foam inserts
- Leading 3D-printing operations for LAM, completing rush jobs from concept to final part (bushings, fittings, V-blocks, spacers) using SOLIDWORKS and BambuLab printers
- Independently executed client-witnessed tests in compliance with ISO 17025 and ISO 9001, delivering accurate, repeatable results and ensuring high client satisfaction
- Performed FEA on plates, pipes, shackles, and other test-setup components to verify structural integrity and safe load handling
- Rewrote and reformatted TWIs and testing procedures in PowerPoint and Word to align with ISO requirements for electrical, mechanical, and test-preparation processes

**Metrolinx** **Mississauga, ON**

*Bus Fleet Engineering Co-op Student* *May 2024 – August 2024*

- Supported the Equipment Engineering team in daily operations to ensure bus availability
- Designed a new shield for a Delco 38MT starter motor in SOLIDWORKS, reducing weight by 13% from the previous prototype, extending service life, and achieving potential cost savings of $130,000 if implemented across the fleet
- Performed root cause analysis for 150+ monthly breakdowns affecting service to categorize breakdowns, recognize repeaters, and ensure the timely completion of corrective work orders
- Created SOPs and technical bulletins, including a stainless-steel hinge installation and a new fire extinguisher bracket for hazard mitigation, improving safety for passengers and technicians as well as equipment durability
- Applied LEAN principles to develop a 1-year plan which would improve the scheduling of the MTO Schedule 4 Inspection due every 30 days by eliminating transportation waste between garages for a fleet of 436 units

## LEADERSHIP & EXTRACURRICULAR EXPERIENCE

**University of Toronto UTWind Design Team** **Toronto, ON**
*Co-President* *July 2025 – August 2026*

- Leading a team of 10 technical leads and 200+ multidisciplinary undergraduate students in designing and constructing a 1200W small-scale wind turbine
- Overseeing the integration of mechanical, electrical, aerodynamics, and controls systems for the wind turbine
- Managing the full project budget and delivery schedule to ensure completion for an annual international competition
- Secured over $20,000 in funding through university grants, levy allocations, and external sponsorships
- Obtained an additional $10,000 in funding to support process improvements, equipment purchases, and tooling upgrades

**University of Toronto UTWind Design Team** **Toronto, ON**
*Mechanical and Manufacturing Lead* *May 2024 – June 2025*

- Led a team of 15+ members in the full mechanical design and manufacturing of a small-scale wind turbine, contributing to UTWind's second 1st-place finish at an international competition in 2024
- Developed the complete mechanical assembly of the turbine in SOLIDWORKS, consisting of 150+ parts, including active pitch-control and braking mechanisms to ensure turbine functionality
- Manufactured mechanical components using 3D printing, machining, woodworking, and soldering
- Evaluated, modified, and machined off-the-shelf components such as couplings, bearings, shafts, lead screws, and motors to meet load, size, cost, and sustainability requirements
- Performed FEA in Ansys Workbench on turbine components—including the hub, blades, and pitch system—to verify load-bearing capacity
- Created technical workshops and comprehensive onboarding documents for 20+ new team members on SOLIDWORKS, 3D printing, and wind-turbine fundamentals, improving team integration and technical capability

**University of Toronto Robotics Association** **Toronto, ON**
*RoboSoccer Mechanical Team Member* *November 2023 – May 2024*

- Redesigned the torso and hip mechanical components of a 3D printed humanoid robot using Fusion360 in qualification for the international RoboCup Competition
- Collaborated in a team of 15+ multidisciplinary members to integrate software and embedded systems with mechatronics components allowing for the functions of walking, kicking, and getting up

*RoboSoccer Social Media Manager* *January 2024 – May 2024*

- Managed complete content calendar, ensuring the timely delivery of engaging and interactive posts

## PROJECTS

**Pultrusion PET Bottle Recycling FDM 3D Printing Filament Machine** **Toronto, ON**
*Mechanical and Manufacturing at UTWind, Personal Project* *May 2024 – May 2025*

- Modifying my existing and built 3D printing kit into a machine that creates 100% recycled FDM 3D printing filament from PET bottles from an on-campus café
- Designing the complete mechanical assembly in SOLIDWORKS including the hot-end mount, aluminum extrusion structural frame, brackets, and filament winder
- Integrating electrical components including the wiring of stepper motors, thermistors, lcd screen, and power supply to the main PCB

## SKILLS & CERTIFICATIONS

**CAD/Design:** SOLIDWORKS, Fusion360, FDM & SLA 3D Printing, Python, SQL
**Analysis/Simulation:** FEA, CFD, Ansys Workbench

**Certifications:** Certified SOLIDWORKS Associate – Mechanical Design (CSWA), George Brown College – Basic Machining Course

**Interests/Teams:** UofT Tricampus Soccer, UofT Flag Football, Engineering Athletics Association