

Mohid Tahir

Mechanical Engineer

+1 (647) 778-8676 | mohid.tahir@mail.utoronto.ca | mohidtahir.ca | [linkedin.com/in/mohid-tahir](https://www.linkedin.com/in/mohid-tahir)

Education

Bachelor of Applied Science and Engineering

Sep 2021 – Apr 2026

University of Toronto, Toronto, ON

- **Mechanical Engineering + PEY Co-op | Minor: Engineering Business | Certificate: EV Design**
Related coursework: Mechanical Engineering Design, Kinematics and Dynamics of Machines, Electric Vehicle Design, Analog and Digital Electronics, Design for the Environment

Technical Skills and Qualifications

Software & Tools: SolidWorks (CSWA Certified), AutoCAD, Onshape, ANSYS RMxprt, Maxwell 2D, Microsoft Office Suite

Engineering & Design: GD&T, DFM/DFA, Tolerance Analysis, BOM Development, FEA, Reverse Engineering, Iterative Design, Prototyping, Engineering Drawings

Fabrication & Programming: Manual Machining (lathe, mill, drill press), Benchtop CNC, 3D Printing, PCB Design, Python, MATLAB

Professional Experience

Mechanical Engineering Intern (Special Projects)

May 2024 – Aug 2025

AGS Automotive Systems | Oshawa, ON

- Modeled 20+ bracket, fixture, and process assemblies in SolidWorks with GD&T-compliant drawings, supporting active production programs across the plant
- Applied the MOST (Maynard Operation Sequence Technique) method to benchmark cycle times on key workflows, identifying changes that cut process time by 15%
- Audited 50+ steel bundles per week against internal specifications, flagging dimensional and surface defects before downstream processing

Design Engineering Intern

May 2023 – Aug 2023

Parts Apart | Toronto, ON

- Designed a coffee mug with a convertible handle (top-mounted for stacking, side-mounted for drinking) end-to-end as the sole design engineer on a two-person team, working directly with the founder across discovery, CAD, prototyping, and user testing
- Modeled the product in SolidWorks and iterated across multiple prototype rounds, resolving manufacturability trade-offs between form, cost, and assembly

Projects

Low-Speed PMSG for Vertical Axis Wind Turbine (Capstone)

Sep 2025 – Apr 2026

Capstone Design (MIE490/491), Client: UTWind | University of Toronto

- Designed a custom direct-drive outer-rotor radial-flux permanent magnet synchronous generator for UTWind's 2026 vertical axis wind turbine, targeting 600 to 1200 W output at 100 to 200 RPM with under 0.1 Nm starting torque
- Built an analytical model in ANSYS RMxprt and validated electromagnetic performance in Maxwell 2D, hitting 842 W output and 0.09 Nm peak starting torque in simulation
- Delivered a fabrication-ready SolidWorks assembly with procurement specs for NdFe35 magnets and ASTM A677 (M19) lamination steel, setting up the 2026 turbine build

All-Wheel-Drive Demonstration Platform

Sep 2025 – Dec 2025

Electric Vehicle Design (APS380) | University of Toronto

- Designed and built a scaled dual-motor split-axle AWD platform in SolidWorks to demonstrate EV drivetrain architecture, torque split, and traction behavior
- Iterated on belt and pulley geometry and shaft alignment across multiple SolidWorks revisions to resolve fit issues and improve drivetrain robustness

Awards & Certifications

Dean's Honours List (Fall 2025), Certified SolidWorks Associate (CSWA), Basic Machining Certification (George Brown College), University of Toronto Skule Frosh Leader