

# Mohid Tahir

Mechanical Engineer

+1 (647) 778-8676 | [mohid.tahir@mail.utoronto.ca](mailto:mohid.tahir@mail.utoronto.ca) | [mohidtaahir.ca](http://mohidtaahir.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

**Process & Analysis:** Six Sigma DMAIC, MOST Work Measurement, Lean, Root Cause Analysis, Continuous Improvement, Life Cycle Assessment (LCA), NPV Modeling, Cost-Benefit Analysis, Weighted Decision Matrices

**Software & Tools:** Microsoft Excel (advanced), Minitab, SolidWorks, AutoCAD, Microsoft Office Suite, Python, MATLAB

**Documentation & Collaboration:** Engineering Drawings, SOPs, Technical Documentation, Stakeholder Reporting, Cross-Functional Collaboration

## 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
- Scoped a target user segment affecting roughly 40% of the population through customer interviews and secondary research, sharpening product positioning before CAD work

### Communications Manager & Project Team Member

Jan 2022 – Apr 2022

Engineering Strategies and Practice II (APS112) | University of Toronto

- Served as the single point of contact between a faculty client and a 5-person design team building a teaching device for the course: *Six Sigma for Engineers (DMAIC)*
- Shortened feedback to revision cycles by roughly 20% through structured weekly touchpoints and a shared requirements log, translating client input into engineering action items

## 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
- Screened four generator architectures (induction, switched reluctance, axial-flux PM, radial-flux PM) using a weighted decision matrix, eliminating candidates with poor low-RPM efficiency and high cogging torque
- Swept slot-pole ratio, arc ratio, air gap, and pole segmentation across dozens of configurations to settle on a 24/20 slot-pole fractional-slot concentrated winding with segmented NdFe35 magnets

## Awards & Certifications

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