

# Muhammad Waseem

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## Skills

**Technical:** Design & Integration, GD&T, DFMA, Microcontrollers, P&IDs, FEA, Control Systems, HMI, Engineering Drawings

**Analytical:** RCA, FMEA, NDT, Reliability, Compliance, Troubleshooting, Scopes of Work, Machine Learning, API Codes

**Software:** AutoCAD, SolidWorks, LabVIEW, MATLAB, Python, Office 365, C/C++, SAP HANA, RSLogix 500, ANSYS, KiCAD

**Soft:** Leadership, Collaboration, Attention-to-Detail, Management, Communication, Problem Solving, Analytical Thinking

## Work Experience

**Maintenance Engineer (Co-op),** Suncor Energy Inc – Oakville, ON Jan – Aug 2024

- Conducted root cause analysis for 50+ pumps and motors, reducing downtime and enhancing system reliability
- Implemented a centralized spare asset database for VRUs, ensuring predictive maintenance and minimal downtime
- Managed procurement processes for parts, collaborating with vendors to ensure time and cost effective solutions
- Managed VRU projects, coordinating schedules and tasks with MS tools and presenting updates for smooth execution
- Developed 6 Scopes of Work for piping modifications to accommodate 8 new PRDs, ensuring API servicing compliance

**Reliability Engineer (Co-op),** Suncor Energy Inc – Oakville, ON May – Dec 2023

- Identified and corrected 500 errors in 1,000 P&IDs, ensuring accurate drawings for efficient project executions
- Authored 3 corrosion control documents covering 3 terminals and 200 piping circuits, boosting corrosion monitoring
- Analyzed and documented 1,500 deadlegs, improving system efficiency, monitoring and reducing corrosion risks
- Orchestrated 3 Engineering Change processes for 3 PRD modifications, ensuring safety compliance and zero incidents
- Developed a database for 2,500 PRDs, enabling accurate tracking of service schedules, preventing regulatory issues

**Automation & Control Engineer (Co-op),** Cyberwolfe – Oakville, ON May – Aug 2022

- Drafted SolidWorks drawings for an automated access system, including mounts and sensor, ensuring easy assembly
- Programmed PLCs to manage gate access using RFID and biometric scanners, enabling secure gate entry control
- Troubleshooted PLC logic during system prototyping and testing, ensuring reliable operation of all components

## Extra-Curricular Experience

**Event Organizer,** Muslim Students Association – Toronto, ON Sept 2024 – Till Date

- Coordinated monthly events, including cultural and educational sessions, fostering engagement among 50 students
- Collaborated with university staff to organize large-scale events, fostering cultural inclusivity within the community

**Mars Rover Mechanical Designer,** Toronto MetRobotics – Toronto, ON Sept – Dec 2024

- Designed robotic sub-assemblies for a rover's soil testing mechanism, enhancing precision for sample analysis
- Directed assembly and testing of components, ensuring seamless integration and successful system deployment

## Projects

**Coffee Bean Destoning Device** Jan – Expected Apr 2025

- Designed a coffee bean destoning system using 2D/3D CAD, integrating fluid mechanics for separation, Allen-Bradley PLCs for control, and 3D printing for prototyping, with HMI, FEA and FMEA ensuring reliability and accurate operation.

**Motor-Housing Bearing Installer** Oct - Dec 2024

- Engineered a PLC-programmed system with four electro-pneumatic actuators and an HMI to automate 30-second bearing installation cycles, incorporating an emergency stop and two-hand activation buttons for operator safety

## Education

**Toronto Metropolitan University,** B.Eng in Mechanical Engineering – Toronto, ON Expected April 2025

**Courses:** Statics & Dynamics, Solid & Fluid Mechanics, Heat Transfer, Electric Circuits, Actuators, Systems Design, Control Systems, Mechanics of Machines, Intelligent Systems Machine Design, Instruments & Sensors, Control Systems