Hasib Tabassum

tabahasi359@gmail.com | LinkedIn | (226) 450-3313 | Brantford, ON | English and Punjabi

EDUCATION

McMaster University | Bachelor of Mechanical Engineering (Co-op) | Hamilton, ON **Expected Apr. 2027**

EXPERIENCE

Manufacturing Engineer Intern | Tank Traders | St. George, ON **Apr. 2023 – Aug. 2023**

- Assisted in the design and optimization of propane tank refurbishment processes.
- Collaborated with senior engineers and production staff to troubleshoot and resolve daily operational challenges, enhancing system reliability and safety.
- Participated in team meetings and contributed to problem-solving discussions.
- Implemented Lean manufacturing principles to reduce waste and streamline workflow.

Guest Registration Assistant | McMaster Residence Life | Hamilton, ON **Feb. 2024 – Present**

- Acted as an ambassador while assisting in guest registration and identifying visitors.
- Managed routine inquiries and maintained files, documents, and records with a high level of confidentiality.
- Updated records in StarRez database and completed troubleshooting of student data
- Interacted with students and parents, maintain confidentiality on residence matters

PROJECTS

Adaptive Trauma Spinal Support | McMaster Design League CAD Designathon | Hamilton, ON | *Autodesk Inventor, Prusa Slicer, OnShape*

- Designed a spinal support device that dynamically conforms to varying body shapes for immediate trauma care, using Autodesk Inventor for simulations and design validations.
- Developed with high-performance materials including carbon-reinforced plastic and neoprene for durability and rapid deployment; incorporated cobalt-chrome alloy for critical structural components.
- Designed with bio-inspired elements mimicking human spine flexibility, enhancing support and comfort in trauma situations.

Motorized Leg Support | McMaster Integrated Cornerstone Design Projects in Engineering | Hamilton, ON | *Autodesk Inventor, Arduino, Prusa Slicer, MotionGen*

- Engineered an adjustable leg support system for wheelchair users to prevent pressure ulcers, integrating automated adjustments controlled via Arduino.
- Utilized Autodesk Inventor for the mechanical design, ensuring compatibility with diverse wheelchair models and optimizing for user comfort and device durability.

Automated Recycling System | McMaster Integrated Cornerstone Design Projects in Engineering | Hamilton, ON | *Python, Arduino, Autodesk Inventor*

- Developed an automated waste sorting system that categorizes materials through sensor-based identification techniques, programmed with Python and controlled with Arduino.
- Designed the system's mechanical components in Autodesk Inventor, focusing on efficiency, user interface simplicity, and maintenance ease.

Technologies: Autodesk Inventor, AutoCAD, Prusa Slicer, OnShape, MotionGen, Ansys Granta EduPack, and MS Office including; Outlook, Word, PowerPoint, and Excel.

Course Work: Statics and Material Mechanics, Dynamics and System Analysis, CAD Drafting and GD&T, Manufacturing Processes and Techniques.

Tools and Machines: Lathe, Milling, 3D printing, Hand Tools, CNC Laser Cutter, Oxyacetylene Torch Welding, Drill Press, Band Saw

Soft Skills: Problem solving, collaboration, time management, organizational skills, communication, analytical skills, decision making skills, bilingual (English and Punjabi).