Haseeb Ayub

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McMaster University **Expected Graduation May 2026**
Honours Bachelors of Engineering BEng, Mechanical Engineering with Co-op *Hamilton, ON*

WORK EXPERIENCE

Webasto Roof Systems **May 2025 - August 2025**
Manufacturing Engineering Intern – Ford F-150 Truck Sunroof Production Line *Plymouth, MI*

- Supported the relocation and launch of the Ford F-150 sunroof production line, implementing upgrades such as Poka-Yoke sensors and conveyor synchronization to achieve high-volume output under time constraints.
- Spearheaded laser crosshair alignment system on the sunroof frame assembly line, improving component placement accuracy, eliminating the need for manual fixturing, and increasing assembly speed.
- Created operator training resources, including parts maps and reference materials, to support onboarding, process understanding, and parts identification for new and existing line operators.
- Conducted time studies on multiple production lines, presenting process changes that improved efficiency and reduced the cycle time by an average of 8% from initial trials.

Collins Aerospace Landing Gear - Raytheon Technologies (Co-op) **May 2024 - April 2025**
Continuous Improvement Engineering Intern – Lean Manufacturing CORE Champion *Oakville, ON*

- Supported site-wide lean process improvement initiatives using Raytheon's CORE system, integrating ACE and Six Sigma to enhance efficiency and reduce waste.
- Designed automated Tier Accountability Boards and work instructions to standardize and streamline communication, escalation, and process consistency.
- Developed lean-supporting digital tools (PowerApps, SharePoint) and designed/prototyped tooling with CATIA and 3D printing to support manufacturing and lean initiatives.
- Developed and implemented sitewide 5S hub to track and address 5S status of individual workstations.
- Performed value stream mapping for the Airbus A350 program.

Magna COSMA International **May 2022 - August 2022**
Mechanical Engineering Intern (Magna Vehma and Value Added Value Engineering Teams) *Troy, MI*

- Utilized A2Mac1 benchmarking software for research on structural vehicle components to further develop suspension support for large-scale production vehicle prototypes.
- Collaborated with the senior engineering team using Teamcenter Visualization to assist with geometric dimensioning and tolerancing to meet assembly requirements at a production scale of 160k+ vehicles annually.
- Gained valuable exposure and insight into many facets of the vehicle production process, including design, prototyping and assembly by visiting 3+ major Magna production plants and prototyping centers.
- Assisted in presenting Value Added changes and ideation of parts for various automotive manufacturers, including General Motors, Honda and Stellantis, regarding optimization of production processes and materials.

PROJECTS and TEAMS

McMaster Solar Car Engineering Team - *Rear Suspension Engineering* **August 2023 - August 2024**

- Utilized Solidworks CAD software to analyze assemblies, determine part cost estimates.
- Managed relationships with various manufacturers and vendors to determine specific part production and prototyping costs and obtained finite element analysis (FEA) certification for use in Solidworks parts modeling.

Engineering Design Experience - Managed and coordinated several engineering projects from ideation to prototyping:

- **SpiderBot** - Prototyped a 3D printed arduino-powered robot prototype designed using biomimicry, coded in Python using spatial and light sensors to clear obstacles.
- **Foldable Space Arm Project –** Designed and analyzed a foldable robotic boom for space using CAD and machining, focusing on zero-backlash locking mechanisms, lightweight structural optimization, and reliable multi-joint deployment.

CERTIFICATIONS, SKILLS & INTERESTS

- **Certifications:** SOLIDWORKS: Simulation for Finite Element Analysis (FEA), RTX CORE Champion
- **Skills:** autoCAD, Solidworks, Teamcenter Visualization, A2Mac1, Python, MS Office, Lean Manufacturing, ACE/Six Sigma, Root Cause analysis, Tier Accountability, Work Instructions, VSM, 5S, CATIA, 3D Printing, PowerApps