Nour Abdelrahman

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Waterdown, ON - L8B 1Y1, Canada

Skills

Software: ANSYS, Excel, VSCode, SolidWorks PDM, MS Office, SVN, SolidWorks Simulation, Bambu Labs
Modelling: SolidWorks (CSWA), AutoCAD, Altium Designer, 3D-Printing, Tinkercad
Programming Languages Python, C++, C, Java

Experience

- **Lincoln Electric, Python X [🌐]** *01/2025 - 05/2025*
  Manufacturing Engineering Intern Waterdown, Canada
  - Created over **300** engineering drawings and assemblies in SolidWorks, following strict ECR and GD&T standards.
  - Streamlined the design process by performing torque, tolerance, and force analysis calculations, as well as FEA simulations, saving approximately **2** hours of validation time per machine while increasing overall machine reliability and universally improving manufacturing quality.
  - Collaborated with senior engineers across departments on high-impact projects, including the design and development of a prototype that reduced production costs by **13%** through optimized material selection and efficient component design.
  - Compiled technical reports and maintained detailed engineering spreadsheets in SAP, including design revisions and BOMs, while coordinating with multiple engineers to streamline communication and improve team efficiency through clear, organized documentation.
- **Waterloo Formula Electric Design Team[🌐]** *01/2025 - Present*
  Electrical Team Member Waterloo, Canada
  - Designed a custom PCB in Altium Designer to monitor voltage levels for electrical safety, integrating a 555 timer circuit and system wiring to drive amplitude-based visual indicators through controlled LED flashing.
  - Supported electrical system validation for Formula SAE compliance and collaborated in technical meetings to track progress, resolve issues, and coordinate tasks across subteams.
- **The Home Depot Store Support Center [🌐]** *06/2024 - 09/2024*
  Quality Technician Intern Bolton, Canada
  - Conducted quality inspections on a variety of products, ensuring compliance with vendor standards, reducing return rates by up to **15%**.
  - Contributed to uncovering production problems in order to reduce overall defect rates.
  - Sampled products to conduct in-depth measurements and tests.

Projects

- **SketchBot:** *10/2024 - 11/2024*
  Tools: [C++, PPT, Word, Excel, RobotC]
  - Designed and coded a robot capable of creating outlines for engineering sketches using C++ and Robot C.
  - Enabled engineering to create outlines **3x** faster and more accurate than by drawing by hand.
  - Ensured optimal functionality and high efficiency by refining software performance and conducting continuous physical testing to validate and improve system behavior.
  - Authored a comprehensive **50** page project report with actionable recommendations for future improvements.
- **V6 Engine Assembly and Simulation:** *01/2025 - 03/2025*
  Tools: [SolidWorks]
  - Designed and modeled a complete V6 engine assembly in SolidWorks containing over **80** parts, including all individual components such as pistons, crankshaft, camshafts, and valves.
  - Applied mechanical constraints using advanced mates to accurately simulate real-world engine motion and timing.

Education

- **University of Waterloo** *Expected Graduation Date: 04/2029*
  Bachelor of Applied Science, Mechatronics Engineering Waterloo, Canada
  - GPA: 3.70/4.00

Additional Information

Languages: English (Fluent), French (Fluent), Arabic (Fluent)

Interests: Rock climbing, Mountain Biking, Skiing, Camping, Aerospace, Boxing, Motor sports, Soccer