Danish Nadeem

dnadeem100@outlook.com https://www.linkedin.com/in/danishnadeem943ab118a/
https://github.com/d-nadeem Portfolio Website: https://d-nadeem.github.io/portfolio/

Education

Ontario Tech University
Mechatronics Engineering *B.Eng.*

Experience

Lincoln Electric **2022 - 2023**
R&D Engineering Intern *East York, Toronto*

- Collaborated with engineering teams on mechanical systems, electrical systems, and applying testing methodologies to prototypes and final products.
- Conducted field testing and performance evaluations of prototype machinery, documenting findings used for engineering reports and review.
- Supported prototype servicing and performed diagnostics, developing hands-on troubleshooting and maintenance skills.
- Collaborated on engineering drawings by creating drawings for new product and revising existing documents for clarity and accuracy.
- Contributed to cost-saving projects through design revisions and material efficiency improvements.
- Developed detailed SOPs that enabled team members to independently conduct test without needing prior knowledge or assistance.

Projects

Smart Airport Cart | **Capstone Project – Public Navigation System**

- Led a team of four to design and implement a marker-based indoor navigation system to guide elderly users through airport terminals.
- Developed a touchscreen-based interface for user feedback and location instruction, focusing on clarity and accessibility.
- Maintained the project within budget constraints with the use of decision matrices, soliciting feedback from supervisor, other teams, and experts, reducing unnecessary expenses.
- Presented to a public audiences during the capstone exhibition, highlighting strong communication and public-facing technical explanation.

Ball Balancing using a 3RRS Parallel Manipulator | **RT Embedded Systems Project**

- Achieved project success by leading the team to have the manipulator balance the ball in a live demo. Strategically divided tasks based on team members' skill sets and reallocated responsibilities to overcome challenges
- Reduced project costs compared to the reference project by optimizing hardware selection and program functionality
- Improved touchscreen program response time and reduced computational load by implementing direct port manipulation, moving average and median filters
- Completed the most challenging project in the class, as commented by the professor, assigning tasks based on skill, and utilizing resources from previous projects

Palletization Workcell | **Robotics and Automation Project**

- Collaborated with a team to design and develop a palletizing workcell focusing on compliance with CSA Safety Regulations CSA Z434 and CSA Z432
- Documented and validated safety protocols through CAD assemblies and risk assessments
- Ensured compliance with safety regulations by reviewing and applying CSA standards for industrial robotic manipulators

Magnetic Assisted Gears | *Onshape, Cura* **Personal Project**

- Developed hands-on experience in prototyping by designing magnetic-assisted gears using a 3D printer
- Iterated through multiple designs, testing, and manufacturing phases while optimizing for performance
- Enhanced project planning and execution skills by setting milestones, allocating resources, and meeting self-imposed deadlines

Technical Skills

Programming Experience: Raspbery Pi, STM32CubeIDE, Arduino IDE, C++, Python, Cura
Developer Tools: Siemens Solid Edge, Solid Works, Onshape, Linux, Visual Studio Code, Arduino IDE