Jaffer Razavi

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TECHNICAL SKILLS

Programming Languages: Python, C, C++, Java, JavaScript
Softwares: NX, SolidWorks, KiCAD, IBM Maximo
Mechanical: Manual Machining, Mill, Lathe, GD&T, ASME B31.1, CSA N289, Arduino, Vehicle Maintenance, Raspberry Pi
Developer Tools: Jupyter Notebook, VS Code, PyCharm, IntelliJ, React, ViteJS

EXPERIENCE

Nuclear Engineering Intern
Framatome Inc.

May 2024 – Sep. 2024
Kincardine, ON

- Initiated an Item Equivalency Evaluation (IEE) for Bruce Power's Unit 3 reactor vault lighting, identifying nuclear-grade replacements for PCB-containing fluorescent lights, resulting in a $30,000 engineering change permit and generating interest in contracting Nemalux Industrial for nuclear-grade electrical solutions.
- Executed a Configuration Information Change (CIC) update, creating new component drawings and utilizing Pandas and OpenText to sort and manipulate BOM data. Managed electrical component updates in IBM Maximo for stakeholders, securing a $20,000 permit and extending hardware replacement intervals to 25 years.

Mechanical Engineering Intern
Framatome Inc.

Sep. 2023 – April 2024
Kincardine, ON

- Developed and implemented a new inventory software using Python, Visual Basic, and a Microsoft Access Database, achieving a $70,000 reduction in software expenses.
- Assessed Isotope Production System (IPS) feasibility for Pressurized Water Reactors, using SolidWorks for prototype designs and engaging in design reviews for a 50x potential increase in market reach and profitability.
- Refactored and documented Python algorithms to ensure accurate Ytterbium-176 isotope capsule readings within Bruce Power's IPS, mitigating $50,000 in potential losses per miscount, increasing overall system accuracy by 25%.
- Updated and standardized training documents and procedures for ISOGEN isotope production system maintenance, significantly reducing potential for hazardous incidents and enhancing worker safety.

Production Technician
F&P Manufacturing Inc.

Jan. 2023 – April 2023
Tottenham, ON

- Led change management and streamlined knowledge transfer for new hires, cutting onboarding time by 50%.
- Tested for quality measure procedures by ensuring that all machines were functioning optimally to minimize downtime and improve efficiency by 15%.
- Maintained daily records of production output, inventory, and machine maintenance, increasing data availability for analysis by 30%.

PROJECTS

EMG Prosthetic Arm | *Python, KiCAD, Arduino, SolidWorks*

Sep. 2024 – Present

- Developing an EMG prosthetic arm tailored for users with limb loss, including custom circuit components.
- Utilizing Python, KiCAD, and SolidWorks to create, test, and iterate on prototype designs.
- Conducting research to create a custom electromyographic sensor.

GlobalReach | *Python, TensorFlow*

July 2024

- Engineered a model on Raspberry Pi to identify television commercials in real-time, allowing businesses to overlay targeted ads during live broadcasts, achieving 80% accuracy in commercial detection.
- Integrated HAILO's AI HAT+ to streamline processing power, reducing bottlenecks during neural network operations and supporting high-speed data handling for future AI developments.
- Enabled dynamic ad placements with the commercial detection model, improving real-time targeted ad opportunities for businesses and enhancing ad relevance for viewers.

EDUCATION

University of Waterloo
Mechanical Engineering, Honours, Co-operative Program, Bachelors of Applied Sciences (BASc)

April 2027