Blake Henriques Stephenson

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Education

McMaster University   *Hamilton, Ontario*

Bachelor of Electrical Engineering | cGPA: 3.8   *Sept. 2019 - Apr. 2024*

Skills

Languages   Python | Java | JavaScript | HTML | SQL | C/C++/C# | MATLAB | SQL | Assembly | VHDL

Tools   AutoCAD | OrCAD | Allegro PCB Design | VS Code | Test Stand | PSpice | LabVIEW | Microsoft Office

Experience

L3Harris Wescam   *Hamilton, ON*

Electrical Automation Engineer Intern   *May. 2022 - Aug. 2023*

- Designed, built, and validated wire harness assemblies, ensuring compliance with IPC-A-620 standards for quality, efficiency, and safety.
- Created and implemented electronic components for a battery-operated, portable tool, resulting in a substantial increase in lens production efficiency by 300%.
- Led the development and construction of a heater test fixture, ensuring compliance with Canadian Standards Association (CSA) guidelines. Focus on safety and precision ensured the fixture met all required standards during inspections.
- Prepared engineering design packages, including project design analysis, engineering drawings, technical specifications, and bill of materials, using the Engineering Change Control (ECC) process to facilitate seamless project execution.
- Utilized Root Cause Analysis (RCA) techniques to identify origins of failures in Electro-Mechanical Assemblies (EMA) production processes. Worked with vendors to set up on site testing, reducing part failures by 10% during my tenure.
- Conducted technical reviews on replacement equipment, ensuring proper fit, form, and function in Non-Identical Component Replacement (NICR) scenarios.
- Prepared and issued change papers to illustrate the impact of modifications on existing drawings, ensuring documentation accuracy.
- Developed a calendar-based web application using React (JavaScript) for monitoring in-office employee attendance, leveraging SQL databases and ASP.NET (C#) for backend integration and data management.
- Created an array of Python tools for automating tasks including purchasing, inventory organization, bill of materials calculation.

FT Group   *Toronto, ON*

Glazier   *July. 2021 - Aug. 2021*

- Restored and installed single-pane historic glass windows, with an emphasis on preserving the integrity of heritage structures.
- Led an effective team to finish a job with 20% lower material cost than quoted without compromising on authenticity.

Related Projects

Chladni Plate Standing Wave Simulation

Python app for wave propagation and harmonic modeling   *June. 2023 - Aug. 2023*

- Built a 2D standing wave simulation, replicating experiments from National Yang Ming Chiao Tung and Taiwan Ocean University using streamlined algorithms.
- Developed a Python-based user interface for singular and parallel simulations.

McMaster Engineering Competition (MEC) Senior Design

Environmental agriculture monitoring system 2021, Wi-Fi controlled pallet moving robot 2023   *Nov. 2021*
                                                                                                          Nov. 2023

- Captained the first-place team at the McMaster Engineering Competition, advancing to the Ontario Engineering Competition in 2021 and 2023.
- Specialized in system integration for motors and sensors: light, humidity, temperature, pressure, utilizing C++ for microcontroller programming. 2021
- Enhanced robot control granularity by 10x through the development of a Wi-Fi link and advanced motor and servo control logic in C++, optimizing precision and responsiveness. 2023