Marcus De Maria

marcusdemaria2014@gmail.com | (365) 778-1116 | Oakville, ON L6H 5Z1| LinkedIn | GitHub

Education

Bachelor of Mechatronics Engineering Sept 2022 - Present
McMaster University | Hamilton, ON

Expected Graduation: April 2026 | 12pt. cGPA: 10.4 | 4pt. cGPA: 3.7

- Accolades: Faculty of Engineering Award of Excellence Scholarship, Dean's Honors Engineering (22/23, 23/24), Ontario Academic Excellence Scholar, Gerald O'Halloran Academic Excellence
- Teams/Clubs: Google Development Student Club, MAC AI Society, McMaster Intramural Sports

Experience

Operations and Project Engineering Intern May 2024 - Aug 2024
ALMAG Aluminum | Brampton, ON

- Analyzed and tested various data sets and operations statistics with help from Excel, SQL, and Python to optimize efficiency and yield of aluminum billets through press operations in the plant by an extra 15%.
- Collaborated on various projects involving CNC machines and other robots in facility processes with SOLIDWORKS, Ansys, and CNC programming to automate 10-20 drill and tapping machines/processes.

Electromechanical Engineering Intern May 2023 - Aug 2023
Welbilt Inc. | Mississauga, ON

- Created 30+ unit assemblies of products for 100+ workers by utilizing specifications of engineering drawings, diagrams, computer-aided design in SOLIDWORKS, and other methods of testing in the facility.
- Assembled and tested 50+ parts to confirm design criteria and functionality as a key contributing member.
- Observed products with the engineering team and collected data through various forms with MATLAB and Python in the engineering lab to increase oven door production and temperature efficiency by 10-12%.

Chassis Sub-Team Member Sept 2023 - May 2024
McMaster Formula Electric | Hamilton, ON

- Pivotal team member who assists in dozens of drawings (physical and CAD) of the chassis through design and group discussions, as well as research and development into data analysis of performance
- Utilizes FEA tools in SOLIDWORKS to conduct a static stress analysis study on several automotive components to predict behavior under various loads, confirming design decisions and analytics.

Projects

Sparse Matrix Solver | C/MATLAB/SQL Nov 2023 - Dec 2023

- Developed a C program that uses Jacobi's iterative method to solve large sparse symmetric matrices. The solutions computed by these matrices were multiplied in Ax + b to produce an accurate residual to the e-10 to e-14 magnitude of accuracy for matrices smaller than 5 digits x 5 digits.

Microcontroller Alarm System | C++/Verilog/Embedded Systems Mar 2024 - April 2024

- Created an FSM with a working controller, breadboard, and embedded C++ programming to act as a security alarm system using push buttons, leds, an LCD screen, motion sensors, and a buzzer.

Recyclomania – Automated Recycling Station | Autodesk/Ansys/Python Oct 2022 - Dec 2022

- CAD designed and manufactured a hydraulic dispensary lift with a linear actuator for implementation in an automated recyclable sorting system that demonstrated a 30% boost in efficiency and speed.

Skills

Technological: Embedded Systems, Circuitry, Microsoft Office Suite, Simulink, Verilog
Programming: Python, C, C++. MATLAB, R, SQL, Tkinter, GitHub, Git, LaTeX, Maplesoft, AI/ML
Manufacturing: AutoCAD, SOLIDWORKS, Inventor, 3D Printing, Acrylic Laser Cutting, Soldering, FEA, Ansys
Soft Skills: Customer Service Engagement, Analytical and Critical Thinker, Problem Solver, Results-Driven, Relationship Building, Strong Collaborator, Organized, Punctual, Multi-Tasker
Certifications: WHMIS Trained, Standard First-Aid