Daye Thom-Manuel

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• Rochester, NY

OBJECTIVES

Electrical Engineering student seeking a Summer 2026 internship in Automation, PCB/Hardware Design, power electronics, and semiconductor devices. Passionate about hands-on circuit design, system optimization, embedded solutions, and project management.

ACADEMIC HIGHLIGHTS

Rochester Institute of Technology (RIT), Rochester, NY
Bachelor of Science in Electrical Engineering, (4th year)   **August 2022 — May 2027**

Relevant coursework: Circuits I/II (circuit analysis), Electromagnetic Fields & Transmission Lines, Linear Systems (digital signal processing), Semiconductor Devices / Digital Electronics, Digital Systems I/II (Hardware design / FPGA), Analogue Electronics, Classical Control.
Licenses/Certifications: PCB Design Certificate (Altium), Power Systems Simulation (MathWorks), OSHA Certified.

Software: MATLAB, C/C++, Verilog HDL/VHDL, Python, Quartus, Altium Designer, LabVIEW, LTSpice, AutoCAD, SolidWorks, Ansys.

Hardware: FPGA, PCB Design, Soldering, Arduino, Raspberry Pi, MSP430, Oscilloscopes, Spectrum Analyzer, Power Tools.

PROFESSIONAL EXPERIENCES

VICOR Corporation, Andover, MA
Design Engineer (Co-op)   **June 2025 — August 2025**
- Assisted in the development, improvement, and optimization of the design of both legacy and new power conversion devices.
- Performed extensive tests on units to simulate real-world scenarios using both manual and automated test benches with temperature chambers and a mixed-signal oscilloscope.
- Used PMBus commands to program units with intended values.
- Worked alongside experienced engineers and attended several conference meetings, enhancing my ability to reach customer satisfaction and understand the business side of Engineering.

EUV TECH, Martinez, CA
Electrical Engineering (Co-op)   **June 2024 — August 2024**
- Designed and implemented a commercial laser detection system using advanced control system techniques, improving detection accuracy.
- Enhanced robotic wafer handling efficiency by ~12% through optimized motor control algorithms.
- Conducted EUV beam testing and verification, analyzing the impact of varying light wavelengths on photomasks using mixed-signal oscilloscopes and LabVIEW automation.
- Optimized robotic system performance by analyzing and reimplementing designs from large datasets, leading to improved efficiency and sales conversion.
- Assisted R&D in developing cleaning solutions for contamination prevention in semiconductor manufacturing.
- Collaborated on process improvements, ensuring successful project execution.

PROJECTS

Hybrid Snowmobile (Clean Snow Mobile Team):
- Designed and optimized the **Battery Management System (BMS)** for a hybrid snowmobile, ensuring efficient energy distribution across multiple cells in series and managing charge/discharge cycles for improved longevity and performance.
- Developed an accumulator capable of operating as the primary power source, with an automated switchover to a gasoline engine at temperatures below -10°C.
- Designed circuitry for **AC-DC, DC-AC, and DC-DC (phase/power)** conversions, ensuring stable power delivery to the motor and auxiliary systems.

Fitness/AR Glasses:
- Developed a GPS-enabled fitness watch for tracking speed, altitude, and location, with Bluetooth and ANT+ integration for real-time heart rate monitoring.
- Programmed the entire system in C++, ensuring efficient communication between sensors, displays, and wireless modules.
- Designed a compact two-layer PCB using Altium Designer, optimizing layout, signal integrity, and power distribution.
- Integrated dual I2C OLED displays for clear visibility of workout metrics without compromising an aerodynamic position.
- Designed and prototyped a custom 3D-printed enclosure in SolidWorks to protect the PCB and internal components.

Extra-Curricular Activities:

RIT Clean Snowmobile Team (active member): I have dedicated multiple hours to actively participating in this SAE team, where I specialize in the management of the battery system. Being in a community like this not only gives me time to socialize with my peers but also builds up my ability to work with others, allowing me to see things from multiple perspectives.