Glen Shane McCammon

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Education

University of Colorado Boulder | Boulder, CO *Graduated – December 2025*
Bachelor of Science in Electrical Engineering
Minor in Energy Engineering

Technical Skills

Hardware/PCB: PCB schematic & layout (Altium Designer), PDN design, decoupling strategy, grounding/return paths, SI/PI fundamentals, EMI/EMC mitigation, high-speed design, soldering/rework
Simulation/EDA: LTspice, Keysight ADS, Ansys HFSS, Siemens HyperLynx, MATLAB
Power Electronics: Buck/boost converters, inverter fundamentals, efficiency optimization, power rail noise reduction
Embedded/Software: Embedded C, C++, Python, Verilog, Linux, Windows
Tools: Digital oscilloscopes, vector network analyzer (VNA), function generators, digital multimeters, logic analyzers, Git

Technical Experience

Portfolio Website: https://shanemccammon.github.io/CvPortfolio

Environmental Variance Analyzer (EVA) Pod, ECEE Capstone Project *September 2024 – May 2025*
Sponsored by: NASA Colorado Space Grant Consortium

- Developed a sensor-based system that measured and locally stored temperature, light, humidity, and air quality data for real-time analysis
- Implemented I2C/UART sensor buses and Wi-Fi telemetry on ESP32-S3, validated via field testing
- EVA pod was designed to be an autonomous sensor hub that gathers local environmental data six times a day for thirty days on a single battery charge (5 V, 8000 mAh)
- Designed and manufactured three custom PCBs designed with Altium Designer

Golden Arduino, PCB Design and Manufacturing *October 2025 – November 2025*

- Designed a custom Arduino Uno PCB (using ATMega328p) with Altium Designer to improve noise performance and reduce EMI
- Signal and power integrity were optimized using decoupling capacitors, continuous ground plane, and isolation switches which cut power rail noise by 47%
- Validated design improvements through oscilloscope analysis and current measurements

PV Panel Power Conditioning System, PV Power Electronics Laboratory *January 2025 – May 2025*

- Designed and built a buck converter, cascaded boost converter, and inverter to both charge a 12V deep cycle battery and provide 120 VRMS at 60 Hz output from an 85 W standalone PV panel
- Converters were designed with 100 kHz switching frequency
- System was successfully tested on a standalone PV panel in full sunlight and converters operated at >80% efficiency.
- Max power transfer of 61 W from PV to battery tested in full sunlight

Work Experience

United States Army | Lafayette, IN *February 2013 – April 2020*
Senior Information Technology and Local Area Network Manager / Sergeant, E-5

- Performed senior operator and systems administrator duties and unit level maintenance functions on assigned computer and satellite systems for over 200 end users while deployed in an austere environment.
- Built and maintained a critical Brigade-level file sharing server for use in overseas operations by over 200 end users.
- Reconfigured existing network of a National Guard Armory to facilitate increased pre-mobilization demands. This led to increased and more reliable connectivity for a central command and control entity where uptime was paramount.

Dick's Sporting Goods | Valparaiso, IN *July 2015 – November 2020*
Freight Flow Leader / Key-Holder

- Supervisor of the operations team of the store and was directly responsible for their performance.
- Frequently opened and closed the store in the role of an assistant manager and managed the sales floor