Andrew Thibeault

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Portfolio: ahthibeault.github.io

Education

CU Boulder — January 2021 - May 2023
Master of Science in Electrical, Computer & Energy Engineering — Boulder, CO

- Relevant Coursework: PCB Design and Manufacture (lab-based), Power Electronics Modeling and Control (2 semesters + lab), Control Systems, Distribution Systems, Power System Dynamics with Renewable Energy, Power System Planning and Operations, Machine Learning
    * In Power Electronics Lab, designed and built the power electronics for a solar power system, consisting of a PV-to-battery MPPT buck converter, a 12V to 150V cascaded boost converter, and a 120V RMS, 60 Hz single-phase H-bridge inverter.
- GPA: 3.95

Vanderbilt University — May 2018
Bachelor of Arts in Physics; Minor in Computer Science — Nashville, TN

- Instructor and Lecture Chair for Wilderness Skills Organization (Fall 2015 – Spring 2018)
    * Planned and lead weekend caving, climbing, whitewater and backpacking trips
- GPA: 3.68, Cum laude

Professional Experience

Microgrid Labs — May 2021 – May 2022
Power Systems Engineer — Boulder, CO

- Designed charging system electrical layout including solar PV and ran simulations of energy requirements and optimized charging schedules for feasibility study of electrifying Hazelwood School District's (St. Louis) 120 bus fleet
- Jointly developed OpenDSS-based power quality analysis of electric vehicle charging loads, with NREL: A Framework to Evaluate the Grid Impacts of EV Fleet Charging Solutions
- Developed optimization constraints and objectives for Python-based coordinated electric vehicle charging controller
- Refactored entire controller module into object-oriented design to aid future development

Boston University Astronomy Department — February 2020 – November 2020
Research Assistant Volunteer — Boston, MA

U.S. Forest Service — May – September 2019
Wilderness Monitoring Intern — San Juan National Forest

Zolo Technologies — September 2018 – March 2019
Software Engineer — Louisville, CO

- Collaborated in a team of four to design high-level approaches to restructuring code architecture, adding new features, and fixing bugs on a C# codebase
- Developed APIs for interaction with laser spectroscopy hardware components, and integrated hardware into runtime engine
- Quickly became the team web app expert with no prior web development experience

Skills

Skilled in: Python, MATLAB, SPICE, OpenDSS, Altium Designer, C#, Git, GAMS, Agile
Experience in: C, C++, Java, PSS/E, MongoDB, Linux, Bash Scripting, LaTeX, JavaScript, HTML/CSS, ASP.NET MVC Framework