Adonte Jakusik

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WORK EXPERIENCE

NextEra Energy

Power Generation Division Intern (Solar Operations) May 2025 – August 2025

- Investigated repeated BCU fuse failures across battery lineups using SCADA and Grafana analytics; diagnosed probable root causes and recommended preventative strategies to improve reliability.
- Estimated over $100K in potential revenue losses due to system downtime and developed a comprehensive cost analysis to highlight urgency of resolution and justify repair investments.
- Proposed a digital tool-tracking solution to CWE and Safety Team to improve compliance with PPE/tool expiration policies; system includes automated email alerts and inspection contact information.

Florida International University

Undergraduate Researcher October 2024 – May 2025

- Developed and tested mathematical models to quantify the cost of operation for Battery Energy Storage Systems (BESS) at the FIU-FPL microgrid, integrating these calculations into Python scripts for automated analysis.
- Engineered Python-based anomaly detection algorithms to identify and correct floating errors in SOC and power data, improving battery performance analysis.
- Collaborated with PhD students to design data processing workflows that interpolate missing values, validate power-SOC relationships, and detect operational inefficiencies in battery and inverter systems.

NextEra Energy

Power Generation Division Intern (Battery Storage) May 2024 – August 2024

- Co-led the identification and analysis of 10+ inverter faults using battery voltage trend analysis, collaborating with senior engineers to implement solutions that decreased fault occurrence by 50%.
- Built Grafana dashboards and automated SMS alerts with screen captures for fire alarms, scaling the system across all sites to safeguard $10M+ in equipment.
- Utilized Python and Microsoft Excel to collect and analyze large data sets from 50+ battery containers and inverter systems, significantly enhancing system monitoring efficiency.
- Authored and published a Process Control Plan (PCP) detailing fault diagnosis process at FPL Cavendish. Earned Lean Six Sigma Yellow Belt certification.

PROJECT EXPERIENCE

Autonomous Robot September 2023 – January 2024

- Collaborated on the creation of an autonomous robot designed to efficiently move boxes to designated areas.
- Gained hands-on experience with advanced hardware tools such as oscilloscopes and multimeters as part of a 6-person team, contributing to diagnosing and resolving hardware issues and enhancing team efficiency.
- Designed and built an Arduino car in a workshop setting, integrating sensors for autonomous navigation. Programmed in C++ to develop and refine navigation algorithms and worked closely with team members to optimize both hardware and software components for improved performance.

Movie Theatre Bucket August 2021 – October 2022

- Invented and 3D printed the "Movie Theater Bucket**,"** a custom-designed solution for carrying all movie-related food, drinks, and snacks in one convenient container, aimed at preventing spills during transport to and from theaters.
- Conducted comprehensive market research and ergonomics studies, ensuring design was optimized for user comfort and usability.
- Mentored peers in CAD modeling and 3D printing processes. Earned Autodesk Inventor Certified User certification.

TECHNICAL SKILLS

- **Hardware:** Arduino Uno, Basys-3 FPGA, Multimeter, ESP32, Oscilloscope
- **Software:** Arduino IDE, Autodesk Inventor, Grafana, LTspice, MATLAB, SCADA, Vivado
- **Languages:** C, C++, CSS, HTML, Java, Python, SQL, VHDL

EDUCATION

Florida International University

Bachelor of Science in Electrical Engineering August 2023 – Present

- **GPA**: 3.9/4.0