Madeleine Masiello

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555 Ramona Drive #75, San Luis Obispo, CA 93405

ELECTRICAL ENGINEER

Motivated EE student with extensive hands-on experience in PCB design, circuit analysis, and hardware debugging, specializing in Altium, MATLAB, circuit design, and system integration. Proven track record of designing complex electrical systems, optimizing production processes, and resolving critical hardware issues. Skilled in managing technical projects, collaborating across teams, and delivering innovative solutions for real-world challenges. Strong foundation in circuit theory, power systems, and microcontroller programming, ready to contribute effectively to advanced engineering projects.

KEY SKILLS & PROJECTS

-Industry level PCB design (Altium)
-SolidWorks
-MATLAB & Simulink
-PID Pendubot Controller Design Lab Project: (MATLAB/Simulink/Hardware)
-PSPICE
-IC Analysis & Design
-Power System Design
-Control System Design
-Python/C/Java/Assembly
-RISC-V Microcontroller (HDL/Verilog)
-Object-Oriented Programming Code Refactor Project
-Capacitive-Touch Piano Rube Goldberg Project
-Design/Construction of Shorted-stub Impedance Matching Network w/ Coaxial Cables Project

PROFESSIONAL EXPERIENCE

Edge Autonomy - San Luis Obispo **June 2024 - September 2024**
Electrical Production Test Intern

- Designed 2 different PCBs from initial schematic prototype to final production using Altium to be integrated into existing ground-based test rig for aircraft system. Boards now used to test boards that are sent through production for functionality.
- Integrated ESD protection into PCB designs, developed USB-C power delivery systems, utilizing IC controllers for power regulation onto board.
- Contributed eight complex Altium footprints/3D models to workspace
- Utilized SolidWorks to create 4 fixtures for PCB testing and assembly.

Edge Autonomy - San Luis Obispo **June 2023 - September 2023**
Electrical Engineering Intern

- Diagnosed and resolved issues with overheating PCBs, including component replacement and validation.
- Initiated the assembly of a ground-based test rig for aircraft system integration.
- Conducted root-cause analysis on faulty batteries and helped implement corrective measures.
- Drafted and executed testing procedures for coaxial cables using a spectrum analyzer.
- Played a key role in resolving non-conformance issues related to air data pods on a UAV.
- Gained experience with JIRA for tracking project progress and managing tasks within a team.

EDUCATION & COURSEWORK

Bachelor of Science - *Electrical Engineering*
Fall 2021 - Present
California Polytechnic State University
San Luis Obispo

- Classical Control Systems
- Electric Circuits I-III
- Energy Conversion Electromagnetics
- Continuous/Discrete Time Signals & Systems
- Microprocessor Sys Design
- Digital Integrated Circuit Design
- Communication Systems
- Data Structures
- Object Oriented Programming
- Digital Design and Assembly Programming
- Semiconductor Device Electronics
- Probability & Random Processes
- Electromagnetic Fields & Transmission

EXTRACURRICULARS

Projects Manager, Cal Poly Amateur Radio Club
Managed and oversaw various projects for the HAM radio club. Led beginnings of disassembly/reassembly of an e-bike. Attends weekly meetings as an officer & contributed to organizing club events. Uses HAM license to transmit on permitted HF bands and communicate locally in North America.

Cal Poly Orchestra / San Luis Chamber Orchestra
Officer, violist