Daniel Maienza

978-604-3987 | daniel.maienza1@gmail.com | linkedin.com/in/daniel-maienza | github.com/dmaienza

Education

University of Massachusetts Lowell, Francis College of Engineering — Lowell, MA
M.S.E. in Electrical Engineering — *Sep. 2023 – May 2024*
GPA: 3.94, Relevant Coursework:

- EECE.7120 – PCB Design Course (Altium)
- EECE.5760 – Principles of Solid State Devices
- EECE.5130 – Control Systems
- EECE.5150 – Power Electronics

University of Massachusetts Lowell, Francis College of Engineering — Lowell, MA
B.S.E. in Electrical Engineering and Physics (Additional Major) — *Sep. 2020 – Dec. 2023*
GPA: 3.98, Summa Cum Laude, Honors College

Experience

Electrical Engineer Intern — May 2022 – August 2022, May 2023 – August 2023
L3Harris — *Wilmington, MA*

- Calculated final mass estimate for flight-ready RipCurl cables using BOMs, CAD drawings, and part manufacturing specs to ensure product met requirements
- Enhanced the move stability of an azimuth motor by analyzing jitter suppression using absolute encoders for speed and position data
- Drafted cable drawings for Quetzal hardware interconnect
- Prepared rooms for projects by conducting inventory, equipment collection, and cleanup
- Established and maintained a bill of materials to ensure precise inventory tracking

Artificial Intelligence Research Assistant — May 2021 – August 2021
PeARL Robotics — *Lowell, MA*

- Developed a program in Python producing a gridworld baseline for artificial intelligence; this environment contained obstacles and goals, serving as a testing platform for algorithms
- Implemented learning algorithms that guide an agent to a goal while navigating obstacles

Projects

Capstone Project: Tabletop Fine Motor Skills Board | *C++, Arduino, Altium* — May 2023 – December 2023

- Designed, tested, and produced a tabletop board consisting of mechanisms providing auditory, visual, and tactile feedback to the user to compensate for a lack of sensory experiences
- Utilized an Arduino and Raspberry Pi to interface different parts of the system: LCD screen, joystick, TFT Shield

Power Electronics Project | *LTspice* — December 2023

- Conducted in-depth analysis and simulation of Single-Phase AC Voltage Controllers, Zero-Voltage-Switching Resonant Converters, and Three-Phase Full-Wave Controlled Rectifiers, highlighting their operational dynamics and efficiency in power electronic systems

The Electric Candle | *Multisim, MATLAB, Oscilloscope, Function Generator, Multimeter* — December 2022

- Created a circuit that can turn on an LED, and then turn it off when a user blows into a mic
- Utilized an AC to DC converter, a battery back-up, an op-amp to amplify the mic's output, and a latching circuit to carry out the LED on/off function

Technical & Soft Skills

Languages: Python, C/C++, MATLAB
Software/Environments: Altium, Multisim, LTspice, Autocad, Digilent Waveforms, Github, Arduino IDE, Linux
Lab Equipment: Oscilloscope, Function Generator, Multimeter, Spectrum/Network Analyzer, Arduino, Raspberry Pi
Soft Skills: Strategic/Critical Thinking Skills, Flexibility, Active Listening, Open Mindset, Problem Solving

Extracurricular and Leadership Activities

Society of Physics Students — September 2020 - May 2024

- Assisted peers with academic inquiries, fostering a collaborative learning environment in math and physics within the SPS community

Riverhawk Robotics Club — September 2021 - May 2023

- Contributed to the design, build, and testing of the control systems and power electronics
- Enhanced battery efficiency by optimizing the balance, maximizing available capacity

Boy Scouts of America — February 2012 - May 2020

- Achieved Eagle Scout rank by orchestrating and leading a project to enhance forest trails and introduce a new trail in Wilmington Town Forest, effectively increasing community attraction to hiking in that forest