Matthew DeCicco

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Education

Florida Polytechnic University — Lakeland, FL — Expected May 2024

B.S. in Mechanical Engineering, Aerospace — Current GPA: 3.88

Relevant Coursework: Strength of Materials • Engineering Thermodynamics • Structure and Properties of Materials • Mechatronic Systems • Introduction to Aero Structures • Fluid Mechanics • Heat Transfer

Campus Involvement: American Society of Mechanical Engineers (President) • Presidential Ambassadors • Orientation Leader • Undergrad Research Assistant

Skills

Software: Solidworks (CSWA Certified) • EES • MATLAB • LabVIEW • COMSOL CFD

Programming: Python • Java • C/C++

Technical: Arduino • Raspberry Pi • CAM/CNC • DAQ • Laser cutting/SVG

Professional: Leadership • Analytical Thinking • Time Management • Collaboration • Communication

Experience

Student Education Assistant — Florida Polytechnic University Mechanical Engineering Department — May 2022 — Present

- Lab Technician for Makerspace using FDM, and SLA additive manufacturing techniques to fulfil requests from professors and students
- Assist professors with their research by using CAM software to generate G-Code for CNC Lathe and Mill to produce robust high precision components

Research Assistant — Florida Polytechnic University — May 2022 — Present

- Participant in the Advanced Mobility Institute's Autonomous Golf Cart project collaborating with graduate students and professors of electrical and computer engineering
- Developed the software operating the golf cart's drive by wire system using Python scripts
- Created, validated, and installed the wiring harness and circuitry used by the Raspberry Pi to operate the cart's systems
- Worked closely with Florida Poly's fabrication specialist to integrate his pneumatic system with my electronic control system

Student Education Assistant — Florida Polytechnic University Physics Department — August 2021 — May 2022

- Lab Technician for Physics 1 (PHY2048L), Physics 2 (PHY2049L), and Experimental Techniques in Engineering Physics (PHY3840L)
- Assisted professors by grading assignments for all three courses

HVAC Technician — Shane's Heating & Cooling — May 2021 — August 2021

- Designed duct work for residential and commercial buildings to optimize mass flow and air velocity at outlets
- Studied refrigeration charts and refrigeration cycles to repair and enhance cooling efficiency of R22, R134A, and R410 systems

Projects

Inexpensive Torsion Tester — Current

- Designed, produced, and tested a torsion tester using first principles thinking and NASA Engineering Methodology
- Verified all components using Solidworks Simulation before manufacturing

Additive Manufacturing Antenna Horn — Spring 2022

- Used Polyvinyl butyral (PVB) and conductive paint to create RF signal horns that performed nearly as well as the $1000 alternative to help with rapid and inexpensive antenna horn prototyping

Inclinometer Covers for Florida Polytechnic University — Fall 2021

- Worked with the facilities team to develop and create 3d printable ASA covers for the inclinometers installed on Florida Polytechnic's Louver system to protect them from UV rays and moisture ingress