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 • GD&T • 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
- Manage over 30 printers from Makerbot, Stratasys, Prusa, Bambu, and Formlabs to process over 2000 prints a year

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 and helped students understand physics concept

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

For more projects please visit: https://m-decicco.github.io/portfolio/