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 • Fluid Mechanics • Heat Transfer • Finite Element Analysis (in-progress)

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

Skills

Software: Solidworks (CSWA Certified) • EES • MATLAB • NI LabVIEW • NI Multisim • 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

- As a Makerspace Lab Technician, I skillfully utilize FDM and SLA additive manufacturing techniques to fulfill diverse project requests from professors and students, ensuring successful project execution.
- Collaborating closely with professors, I support their research by employing CAM software to generate precise G-Code for CNC Lathe and Mill operations, producing high-quality, robust components.
- Responsible for managing a fleet of over 30 printers from renowned brands like Makerbot, Stratasys, Prusa, Bambu, and Formlabs, I efficiently oversee the processing of more than 2000 prints annually, ensuring timely project completion and satisfactory outcomes.

Research Assistant — Florida Polytechnic University — May 2022 — Present

- Actively participated in the Advanced Mobility Institute's Autonomous Golf Cart project, collaborating with a diverse team of graduate students and esteemed professors in electrical and computer engineering.
- Successfully developed and implemented precise Python scripts for the golf cart's drive-by-wire system, ensuring smooth operation and precise control.
- Designed, validated, and skillfully installed intricate wiring harness and circuitry for the Raspberry Pi, achieving seamless integration and optimal cart system performance.
- Collaborated closely with Florida Poly's fabrication specialist, integrating his pneumatic system with my electronic control system, resulting in an innovative and cohesive solution that significantly enhanced the cart's capabilities.

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

- Supported professors and students in Physics 1 (PHY2048L), Physics 2 (PHY2049L), and Experimental Techniques in Engineering Physics (PHY3840L) courses as a Lab Technician, aiding comprehension of complex physics concepts.
- Ensured fair evaluation and timely feedback for students' academic progress by diligently grading assignments, fostering a conducive learning environment, and contributing to overall academic achievement.

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

For a comprehensive list of additional projects, please visit my portfolio at: https://m-decicco.github.io/portfolio/