Matthew DeCicco

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https://m-decicco.github.io/portfolio/

Education

Florida Polytechnic University — Lakeland, FL May 2024

Bachelor of Science in Mechanical Engineering, Aerospace — 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

Experience

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

- Proficiently utilize FDM and SLA additive manufacturing techniques to fulfill diverse project requests for professors, community members, and students.
- Collaborate with professors to support research through CAM software, generating precise G-Code for CNC Lathe and Mill operations.
- Responsible for managing a fleet of over 30 printers from brands like Makerbot, Stratasys, Prusa, Bambu, and Formlabs, efficiently overseeing the processing of more than 2000 prints annually, ensuring timely project completion and satisfactory outcomes.

Autonomous Golf Cart Research Assistant — Florida Polytechnic University May 2022 — Present

- Participated in the Advanced Mobility Institute's project, collaborating with a team of graduate students and esteemed professors in electrical and computer engineering during which I primary authored an abstract in IEEE Xplore.
- Successfully developed and implemented Python scripts for the golf cart's Drive-By-Wire system, ensuring smooth operation and precise control.
- Designed, validated, and installed the wiring harness and circuitry for the Raspberry Pi and Arduino, achieving seamless integration and optimal cart system performance.
- Collaborated with Florida Poly's fabrication specialist, integrating a pneumatic system with the electronic control system, resulting in an innovative and cohesive solution that significantly enhanced the cart's capabilities.

Physics Department Student Education Assistant — Florida Polytechnic University 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

- 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/