Portfolio sam-piedmonte.me

Samuel M. Piedmonte

smpiedmonte@gmail.com (540) 229-1373

www.linkedin.com/in/smp6773

LinkedIn

(6.10) 223 1373

EDUCATION Bachelor of Science in Mechanical Engineering

Engineering Leadership Development Minor Graduated
The College of Science and Engineering December 2023

The Pennsylvania State University, University Park, PA GPA: 3.34/4.00

WORK

Mechanical Engineer I

EXPERIENCE General Dynamics Electric Boat, New London CT (December 2023 - Current)

Secret Clearance and Security Representative

- Cognizant engineer of three complete systems.
- Completed complex calculations including force analysis, kinematics, and vibrations to ensure systems comply with standards.
- Managed and organized large-scale discussions to integrate multiple complex systems and ensure functionality.
- Completed comprehensive technical documentation.

Mechanical Engineering Intern

Peraton, Princess Anne MD (June 2023-August 2023)

- Designed and retrofitted testing fixtures and parts for a next generation rocket including fins, skins, and separation systems.
- Devised six sets of constraints and tests for constraints including force analysis and advanced kinematics to test for allowable flight.

Mechanical Engineering Intern

Bechamo, Buffalo NY (Dec 2022-May 2023)

- Designed, built, and tested aircraft with functioning moving surfaces to physically represent emulation code.
- Fabricated, assembled, and verified multi-degree of freedom motor rotating system using additive manufacturing.

PROJECTS

- Capstone Prototyped, built, and tested 6 DOF robotic arms to automate assembly.
- ACRP Challenge Designed and analyzed novel runway excursion prevention device.
- Engineering Design Prototyped, coded, and 3D printed fully functional smart cup.
- Entrepreneurship Created custom neon sign business to generate over \$500/week.

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SKILLS	Engineering Design & Graphics	Finate Element Analysis

Thermodynamics, Fluid Dynamics, Heat Transfer	Statics, Dynamics, Solids
Modeling Dynamic Systems, Mechanism design	Vibration Mechanics
Engineering Leadership, Project Management	Circuits, Mechatronics

SOFTWARE SolidWorks, SolidWorks Simulations (FEA CFD), AutoCAD, NX, Team center, DOORS,

MATLAB, Arduino, C#, Python Programming languages

LEADERSHIP	Peer Partnership Program	2022-2023

Engineering Leadership Society 2	021-2023
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Recipient, Boy Scouts of America Eagle Scout Rank 2020