

# Samuel M. Piedmonte

Portfolio  
[sam-piedmonte.me](http://sam-piedmonte.me)

[smpiedmonte@gmail.com](mailto:smpiedmonte@gmail.com)  
(540) 229-1373

LinkedIn  
[www.linkedin.com/in/smp6773](http://www.linkedin.com/in/smp6773)

---

|                  |   |                                    |
|------------------|---|------------------------------------|
| <b>EDUCATION</b> | <b>Master of Science in Mechanical Engineering - Robotics</b><br>Purdue University, West Lafayette, IN  | <b>Expected<br/>Dec 2027</b>       |
|                  | <b>Bachelor of Science in Mechanical Engineering</b><br><b>Engineering Leadership Development Minor</b><br>The Pennsylvania State University, University Park, PA | <b>Dec 2023<br/>GPA: 3.34/4.00</b> |

## **WORK**      **Mechanical Engineer II**

**EXPERIENCE**      **General Dynamics Electric Boat**, New London CT (December 2023 - Current)  
**Secret Clearance and Security Representative**

- Responsible for requirements definition, analysis, production and integration for four complete mechanical systems.
- Sized and designed components and hardware using force, kinematic, and vibration calculations to meet performance and manufacturing requirements.
- Design and lead technical collaboration with vendors for design, requirements and assembly methods to develop and deliver engineered components.
- Lead cross functional technical reviews to integrate multiple complex systems, ensure functionality and drive design optimization (DFM & DFA)
- Produce production 2D drawings with GD&T to support fabrication & assembly.

### **Mechanical Engineering Intern**

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

- Designed and retrofitted testing fixtures and hardware for a next generation rocket including fins, skins, and separation systems, supporting fabrication and assembly.
- Defined six sets of constraints and tests for constraints including force analysis and advanced kinematics to test for allowable flight and validate simulation.

### **Mechanical Engineering Intern**

**Bechamo**, Buffalo NY (Dec 2022-May 2023)

- Designed, built, and tested aircraft with actuated control surfaces to physically represent emulation code.
- Prototyped, fabricated, and assembled multi-degree of freedom motor rotating system using additive manufacturing and electromechanical components.

**PROJECTS**      **Capstone:** Prototyped, and assembled 3D printed 6 DoF robotic arms to automate assembly, including integration of electromechanical components, and controls.

**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.

**SKILLS**      Engineering Design & Graphics, GD&T      Finite Element Analysis  
Statics, Dynamics, Solids, Vibration Mechanics      Circuits, Mechatronics  
Modeling Dynamic Systems, Mechanism design      Project Management

**SOFTWARE**      SolidWorks, AutoCAD, Siemens NX, Team center, SolidWorks Simulations (FEA CFD),  
MATLAB, Arduino, C#, Python, DOORS, Mathcad Programming languages

**LEADERSHIP**      Peer Partnership Program      2022-2023  
Engineering Leadership Society      2021-2023  
Recipient, Boy Scouts of America Eagle Scout Rank      2020