BRIGGS PUGNER

MD, United States | Bjpugner@umes.edu | 443-373-9424

EDUCATION

Bachelor of Science in Computer Engineering **October 2024 — May 2027**

University of Maryland Eastern Shore, Princess Anne

- Richard A. Henson Honors Recipient
- 4.00 GPA

PROFESSIONAL EXPERIENCE

Undergraduate Researcher, University of Maryland Eastern Shore **October 2024 — Present**

- Design and program physics-engineering experiments using Fusion 360, Python, and Arduino, collaborating with professors on system development and component selection.
- Developed a radiative cooling experiment controlled by LabView with National Instruments equipment, analyzed data in MATLAB, and currently researching negative compressibility systems with electromagnets and force sensors.

Research Intern, Princeton Plasma Physics Lab (PPPL), Princeton, NJ **June 2025 — August 2025**

- Developed an implementation plan for a Mirror Langmuir Probe for the MUSE compact stellarator experiment.
- Diagnosed and resolved software errors in VHDL code, rebuilt the codebase in a Linux virtual machine, and deployed the **FPGA implementation** to hardware for the Mirror Langmuir Probe system.

Engineering Intern, NASA, Wallops Island, VA **January 2025 — May 2025**

- Engineered an automated launcher control system integrating a Python back-end with Arduino-triggered mechanisms to enable precise azimuth and elevation adjustments.
- Developed a Python-based serial communication interface and a desktop GUI for intuitive and streamlined operation.

Engineering Intern, NASA, Wallops Island, VA **June 2024 — August 2024**

- Led a team of interns to develop a scheduling tool for NASA Wallops Range, designing a PowerApps application with a structured Microsoft Workflow for managing and approving events on a master range schedule.
- Applied programming expertise to handle complex logic involving hundreds of variables and conditions, ensuring technical accuracy, communication, and meeting all project deadlines.

Engineering Intern, NASA, Wallops Island, VA **June 2023 — August 2023**

- Developed safety procedures for the secure operation and movement of heavy machinery, significantly reducing accident risks during NASA operations.
- Collaborated in ground operations that played a key role in the successful launch of Antares NG-19.

TECHNICAL SKILLS

Python Programming	Arduino / C++	Fusion 360 CAD	Solid Works
FPGA Programming	Experimental Research	Linux	

ADDITIONAL INFORMATION

- **Links:** LinkedIn, E-Portfolio