

AARON DUBOIS

Swarthmore, PA | adubois1@swarthmore.edu | (703) 473-1448 | duboisprojects.github.io/projects/

Education

Swarthmore College | *B.S. in Engineering (Mechanical Focus); B.A. in Physics* - GPA: 3.95/4 2026

Coursework: Linear Systems, Fluid Mechanics, Electrodynamics, Thermodynamics, Differential Equations, Mechanics, Optics, Electrical Circuit Analysis, Data Structures & Algorithms, Special Relativity

James Madison High School | GPA: 3.97/4 unweighted 2022

National Merit Finalist; Olympic Development Program, Varsity, & Club Soccer; Various Honor Societies; Math & CS Tutor

Engineering Experience

Smith Materials Lab | *Research Assistant* | Swarthmore, PA May 2023 - Present

- Designed and built an airtight cooling chamber that uses an on/off temperature controller and thermoelectric modules for 3 month long battery cycling experiments for under \$1000. Commercial alternatives exceed \$10000.
- The design was effective and a second module was requested. Currently writing a methods paper that explains the details of the design so other labs can replicate the design.
- Performed Battery Cycling, Mössbauer Spectroscopy, and Electrical Impedance Spectroscopy to analyze different battery materials and their performance in varying temperatures and circumstances.
- Presented at various events.

Pression, LLC | *Product Development Engineer Intern* | Coatesville, PA May 2023 - July 2023

- Rearchitected and wrote the majority of the code (in a C-like language) for Pression's medical device display that communicates with microcontrollers and sensors in the device to control the treatment from start to finish. Used in Pression's clinical trials.
- Designed and prototyped peripheral components for Pression's medical device, including a hospital bed mount to secure tubing for compressed air during treatment and physical data interface ports.
- Supported the CEO with one of the company's pitch deck and drafted an application for a startup incubator on behalf of Pression.
- Authored protocols and processes for software requirements, release, version control, and verification for use in the Pression Quality Management System.

Visit duboisprojects.github.io/projects/ for more projects and visuals.

Leadership Experience & Campus Activities

Comma | *Co-Founder* | Swarthmore, PA Feb 2023 - Sep 2023

- Won 2nd place at SwatTank 2023 for best startup pitch.
- Developed prototypes of user and library interfaces, a website, and many other start-up related materials.
- Established relationships with 8 libraries to provide physical books and beta test Comma's software.

Other Campus Positions & Activities | Swarthmore College

- Engineering Shop Technician
- Drone Club Launch Director
- Club & Intramural Sports (Club Soccer; Club Squash; Intramural Dodgeball Champion)

Software Skills: CAD/CAM, Microcontrollers/PCBs, CFD, Programming in C++

Building Skills: Conventional and CNC machinery, 3D Printing, Woodworking, Soldering, Laser Cutting, Welding