AARON DUBOIS

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Education

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

Coursework: Linear Systems, Fluid Mechanics, Electrodynamics, Optics, Thermodynamics, Electrical Circuit Analysis, Differential Equations with Linear Algebra, Mechanics, 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

- Led the design and creation of an airtight cooling chamber for 3 month long battery experiments for under $500. Commercial alternatives are more robust but exceed $10000.
- Rapidly prototyped designs with CAD/CAM, CNC & Manual Machining, 3D Printing, Laser Cutting, & Soldering. Created plots of temperature stability and variation in the chamber.
- The chamber design was effective and a second chamber was requested. Authoring a methods paper that details the design so other research labs can replicate it.
- Presented design and results at 4 events. 3 more presentations are planned including at the Material Research Society's Conference in Boston.

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

- Programmed (in a C-like language) the main display of Pression's primary product, the Wave PRO, that controls treatment and communicates with microcontrollers and sensors. My code is still in use 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 decks 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 experiences, 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)

Building Skills: Manual and CNC machinery, 3D Printing, Woodworking, Soldering, Laser Cutting, Welding
Software Skills: CAD/CAM, Microcontrollers, Programming in C++/C, GitHub