

# 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, Differential Equations, Mechanics, Optics, Thermodynamics, Electrical Circuit Analysis, Data Structures & Algorithms, Special Relativity

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

National Merit Finalist; Olympic Development Program VA Soccer; Varsity Soccer; 5x5 Soccer Ranked #2 Nationally; Various Honor Societies; AP Scholar with Distinction; Math & Computer Science Tutor

## Engineering Experience

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

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

Visit [duboisprojects.github.io/projects/](https://duboisprojects.github.io/projects/) for more projects and visuals.

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

- Designing and machining an airtight cooling apparatus that uses an on/off temperature controller and thermoelectric modules.
- Using Mössbauer Spectroscopy among other techniques to analyze different battery materials and their performance in varying temperatures.

**Masroor Flow-Induced Vibrations Lab** | *Research Assistant* | Swarthmore, PA Jan 2023 - May 2023

- Designed and machined experimental setups using CAD and mostly manual techniques (with some CNC).
- Used CAD Shape Optimization techniques to minimize mass of parts for fluid mechanics constraints.

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

- 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.
- 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. Now in clinical trials.
- Supported the CEO with 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.

## 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, PA

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