Dylan DiBeneditto

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Education

Virginia Tech **2026-2030 (expected)**

B.S. Electrical Engineering (Declaring Spring 2027) GPA: 3.8/4.0

Relevant Coursework: Physics I&II, Multivariable Calculus, Data Structures and Algorithms, Discrete Math, Intro to ECE

Experience

Waldron Catering **2025**

Freelance Full-Stack Web Design & Development

Reworked the full brand identity of a preexisting catering company who was established but didn't have a presence online. Worked with the owner to modernize how their customers interact through their website. Built out the website that the owner envisioned while keeping SEO, accessibility, and optimization for different screen sizes.

Extracurriculars

Rocketry @ VT **2026-**

Avionics

Developing PCBs for the 30k rocket in KiCad. Current projects have been creating a RF controller module, which is able to take in sensors or commands from external peripherals and receive and transmit both 2.4GHz Bluetooth and 915MHz LoRa frequencies. This project has included working with the bare dye nRF52840, nRF21540 to extend Bluetooth, and a SX1262 LoRa Modem all on board over SPI. The board has breakouts for i²c, UART. The board is also able to convert power from a 2S LiPo down to the 3.3V through a switching and linear dropout regulator for lower losses.

K42 **2026**

Independent Hardware Project (Wireless Split Keyboard)

A 42-key wireless split mechanical keyboard that I built to combat wrist pain from programming. The keys were formed to my hand shape and the board consisted of an nRF52840 and had on board Bluetooth for cross communication, built in LiPo charging circuitry over USB-C, Haptic Feedback, and OLED peripherals. The board was optimized for JLCPCB PCBA production and investigated a direct-to-consumer launch strategy to turn the board into a product. Designed the housing using Laser-cut acrylic and high-grade anodized aluminum.

'fmov' **2025**

Open-Source Python Library (10,000+ downloads)

Library that handles the backend of video creation (stands for frames to movie). The library started as a side project where I needed to automate video creation programmatically. The library interfaces with a lower-level C based project 'FFmpeg'. The library allows for simple video creation, allowing all the code to stay in Python without having to interface with rudimentary nested terminal commands. Most of the time went into documentation and working with feedback to broaden use cases of the library to what other users needed.

Computer Science National Honor Society **2024-2026**

President and Founder

Founded and ran the honor society at my high school. The club did tutoring and even went to the local elementary school to teach lessons for the 'hour of code'. We won a grant for a 3D printer for our school, and I spent a semester building out a library to interface with the printer through Java code. The library ended up becoming a big part of my senior outreach project, where we tested lesson plans for students to learn to code through creating 3D objects that were created through my library. The library and the lessons are now part of the lower level and AP Computer Science curriculum for our school.

Skills

Hardware: KiCad, PCBA, 2.4GHz & 915MHz RF designs, SPI, USB, i²c, UART, nRF/STM32/ESP32 PCB Design

Software: C++, C, Python, Java, HTML/CSS/JavaScript/TypeScript, React.js/Next.js, Swift (iOS), Go, Rust

*U.S. Citizen eligible for federal security clearance