

DILLON HARRINGTON

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EDUCATION

Northeastern University

Expected May 2030

B.S. Mechanical Engineering

Coursework: Physics for Engineering 1, Calculus II, Cornerstone of Engineering 1

Shrewsbury High School

2026

GPA: 4.29

Coursework: AP Calculus AB (5), AP Physics 1 (5), Honors Engineering & Manufacturing

EXPERIENCE

Shrewsbury High School Robotics Team (FRC 467) – Team Captain & Mechanical/CAD Lead

2024 – 2026

- Led a 68-member team as captain: assigning work, coordinating subteams, and reporting progress
- Directed design of the 130-lb, 600+ part V2 robot with minimal mentor involvement: set its archetype, assigned subsystems, ran design reviews, and approved parts; V2 tripled scoring output compared to V1 (3 to 9 points/sec)
- Designed and approved 300+ unique custom parts across two robots in a single season
- Designed parts for CNC router, vertical mill, metal lathe, and 3D printing within each process's constraints, made technical drawings for operators, and machined parts on the vertical mill
- Led physical assembly of the final competition robot three years in a row
- Designed the 2024 shooter and the 2025 end effector and elevator; the 2025 robot reached the World Championship, the team's first appearance in 8 years
- Built spreadsheets tracking hundreds of parts and assemblies, their properties, and machining status

Dillon's Car Detailing – Founder & Owner

2022 – 2026

- Founded and ran a detailing business for 4 years, serving nearly 100 cars and growing through customer referrals
- Designed and launched DillonsCarDetailing.com from scratch

PROJECTS

FRC Driver Station Console – Designer & Builder

2023 – 2024

- As team's driver, designed and built a driver station replacing the team's rudimentary console, from requirements through CAD
- Made it ergonomic and visually polished with handles, tool storage, added operator controls, and LEDs
- Planned the electronics and power system (fans, Raspberry Pi Pico-based operator console) and soldered the LEDs

FRC Robot Shooter Subsystem (V1) – Sole Designer

2026

- Designed the robot's most complex subsystem (80 unique parts), modeled parametrically for fast design changes
- Sized motors via power calculations and built an in-CAD model predicting launch distance from motor specs

HONORS & AWARDS

- FIRST Robotics Competition Dean's List Semi-Finalist 2025
- Science & Engineering Certificate of Honor, Shrewsbury High School 2026
- American Citizenship Award, Shrewsbury High School 2026

SKILLS

CAD: Onshape, Fusion 360, Inventor

Fabrication: 3D printing, vertical mill, soldering; design for CNC router, lathe, and laser cutting

Electronics: Power system and wiring planning, motor sizing, Raspberry Pi Pico prototyping

Design: Parametric design, design for manufacturability, technical drawings, design reviews, rapid prototyping

Software: Excel, Google Sheets, Python (basic)