Elias Dunham
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Education

Northeastern University, Boston, MA — May 2028
Candidate for Bachelor of Science in Mechanical Engineering and Physics
GPA: 3.81
Coursework: Thermodynamics, Statics, Materials Science, Differential Equations, Physics 2
Activities: American Society of Mechanical Engineers, Composing Club, Delta Tau Delta

Southern Lehigh High School, Center Valley, PA — June 2023
Activities: Class Vice President, President of Future Business Leaders of America, Rocket Club

Computer & Machining Skills

3D Modeling: SolidWorks, AutoCAD
Programming: C++, JavaScript, Python, Arduino, MATLAB, Microsoft TrOCR, Prompt engineering
Machining: 3D Printing (FDM & SLA), Metal working

Work Experience

MIT Laboratory for Translational Engineering, Cambridge, MA — January - June 2026
Incoming Mechanical Engineering Co-op

- Support prototyping and mechanical testing of novel drug-delivery systems within a multidisciplinary research group.
- Operate, maintain, and troubleshoot advanced fabrication equipment, including SLA, DLP, PolyJet, and FDM 3D printers, a CNC mill, and laser cutting systems.
- Assist with fabrication workflows, material preparation, and iterative design tasks for biomedical device development.

FLX Solutions, Bethlehem, PA — June - August 2025
Mechanical Engineering Intern

- Collaborated with team to duplicate company's testbed for evaluating embedded software on hardware
- Programmed a custom application with JavaScript and OpenAI to fully automate company's task assignment protocol
- Created and trained a custom LLM using Python and Microsoft TrOCR to automatically integrate handwritten notes into the company's information database

Projects

Biomimetic Fan Blade Technology, Cornerstone of Engineering 2 — January - March 2025

- Used SolidWorks to develop fan blades based on the mechanics of owl wings
- Proved that blades minimize turbulence and noise by 30% compared to industry standards

Biometric-Tracker, Cornerstone of Engineering 1 — November - December 2024

- Collaborated with a team to develop a wearable motion-tracker for horse racing
- Designed device using Arduino and fabricated parts using SolidWorks and FDM 3D printing
- Coded MATLAB script to test accuracy; error within 5% compared to third-party sensors