Eli Lewis
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EDUCATION

Northwestern University Evanston, IL
Bachelor of Science in Manufacturing and Design Engineering Expected June 2029

TECHNICAL SKILLS

Engineering & Design: CAD (Fusion 360, OnShape, SolidWorks, SketchUp), 6S and lean manufacturing
Fabrication & Prototyping: manual mill and lathe, laser cutting, 3D printing, shop tools, Arduino, precision soldering, circuitry, agentic coding

WORK EXPERIENCE

Northwestern University, Segal Prototyping & Fabrication Lab Evanston, IL
Shop Trainer September 2026 – Present
- Train students on the manual mill, lathe, and laser cutter and supervise open-shop hours
- Clean, organize, maintain shop equipment

Ely Tool (custom tooling shop) Springfield, MA
Continuous Improvement Intern July – September 2026
- Modeled the full shop floor in SketchUp and developed the reorganization layout management adopted
- Sequenced equipment moves to eliminate days of shop downtime, estimated at ~$5,000 each and freeing 400+ sq ft
- Designed a barcode location system and working mockup for a dense parts room using agentic coding

Jewish Community Center (JCC) Greater Boston Needham, MA
Makerspace Lead August 2022 – May 2025
- Developed and supervised a bi-weekly afterschool makerspace program
- Guided up to 16 kids through self-led STEM projects using upcycled materials
- Organized efficient storage system for hundreds of materials and tools

PROJECT EXPERIENCE

PressAble Adjustable Switch Mount, Design Thinking & Communication
- Interviewed occupational therapists at the Park School to determine initial design goals and constraints
- Created $36 switch mount that drifted 0mm in a 60-second tapping test and 30 seconds to adjust to any activation location
- Prototyping lead on my team of 4 using Fusion 360 CAD to 3D-print components

Woodworking Apprenticeship, Wooden Hand Plane Build May – August 2025
- Drafted and fabricated a functional wooden hand plane capable of producing shavings within ±0.001 in tolerance
- Established reference surfaces and verified flatness using precision squares
- Tuned cutting edge geometry and blade angle to maintain consistent material removal

3D-Printed Electric Car Kit Independent Design Project 2022, 2024
- Used Fusion 360 to design a modular 3D-printed car activity and facilitated build session with 16 participants
- Applied human-centered design principles to optimize for intuitive assembly with minimal instruction
- Managed client communication, budgeting, timelines, and design iteration based on user testing

LEADERSHIP & CAMPUS INVOLVEMENT

Brimmer & May School Newton, MA
Peer Tutoring Program, Co-Founder & Co-Head May 2023 – May 2025
- Designed and led a peer tutoring system supporting 15+ tutors with self-serve scheduling and minimal administrative overhead
- Determined criteria and reviewed applications, coordinated with faculty for student referral and program feedback

PATENTS

U.S. Patent Appl. Pub. No. 2025/0368466 A1, "Handheld Tape Dispenser and Methods of Use Thereof" — 2025
Inventor