

## Eli Lewis

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## EDUCATION

### Northwestern University

*Bachelor of Science in Manufacturing and Design Engineering*

Evanston, IL

Expected June 2029

## TECHNICAL SKILLS

**Engineering & Design:** CAD (Fusion 360, OnShape, SolidWorks)

**Fabrication & Prototyping:** 3D printing, shop tools, machining basics, Arduino, precision soldering, circuitry

## PROJECT EXPERIENCE

### Woodworking Apprenticeship — Wooden Hand Plane Build

May – August 2025

- Drafted and fabricated a functional wooden hand plane capable of producing shavings within  $\pm 0.001$  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

### Portable Game Console Conversion — Independent Engineering Project

August – September 2023

- Converted a Wii game console into a handheld device integrating controls, batteries, screen, and speakers
- Soldered onto copper traces 0.1 mm in size to reroute signals to modified motherboard and custom circuit boards
- Researched technical documentation and community resources to resolve technical integration challenges

## WORK EXPERIENCE

### Jewish Community Center (JCC) Greater Boston

*Makerspace Lead*

Needham, MA

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

### Brimmer and May School

*VEX V5 Robotics Team Captain*

Newton, MA

Fall 2023 – Winter 2025

- Led team of 5 through research, design, and assembly of competition-ready robot
- Achieved 100% faster assembly times through full re-organization of current supplies and inventory restock

### Recirclable (reusable take-out container service)

*Product Feedback & Prototyping Intern*

Newton, MA

Summer 2024

- Prototyped a hybrid portable and stationary card-scanning device using Fusion 360 and 3D printing to allow both table-side and front-desk use
- Interviewed 6 current and prospective restaurant partners to gather feedback and inform design decisions

### 3D Printing and General STEM Tutor

2021 – Present

- Offered private 3D printing/modeling instruction and machine troubleshooting
- Taught engineering principles to kids with behavioral challenges through recurring weekly activities with a focus on leveraging available household materials

## LEADERSHIP & CAMPUS INVOLVEMENT

### Brimmer & May School

*Peer Tutoring Program — Co-Founder & Co-Head*

Newton, MA

May 2023 – May 2025

- Designed and led a peer tutoring system supporting 15+ tutors, enabling independent scheduling and minimizing administrative overhead to ensure program continuity
- 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*