

# Elaine Liu

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## EDUCATION

### Massachusetts Institute of Technology | Cambridge, MA

August 2022 - May 2026

- Candidate for Bachelor's in Electrical Engineering and Computer Science
- Clubs and Activities: Sloan Business Club Executive Board, Chinese Student Club Executive Board, Kappa Alpha Theta
- Relevant Courses: Fundamentals of Programming, Mathematics for Computer Science, Intro to Low-level Programming in C and Assembly, Explorations in Management, Honors Java Data Structures, Honors Bioengineering, AP Statistics

### Charlotte Latin School | Charlotte, NC

August 2018 - May 2022

- SAT: 1580, GPA: 4.8/4.0 weighted
- *Awards and Leadership*: Student Body President, Charlotte Latin School Cum Laude Society, Leadership & Service Award

## EXPERIENCE

### Undergraduate Researcher

January 2023 - present

#### MIT Koch Institute for Integrative Cancer Research

- Designed micro flexible PCBs on Altium for controlled drug delivery smart capsules, adding sensors to MEMS devices.
- Fabricated novel catheters and CAD designed catheter jigs for a stem cell-based therapy acting as a bioartificial pancreas.

### Contrary

October 2022 - present

#### Venture Partner

- Scouting early-stage founders and startups, investing up to \$2M, writing introductions, and managing deal flow.

### Eventys Partners

May - July 2022

#### Engineering Intern

- Developed sanitizer usage management IoT interface using C++ and Particle to be deployed across the NYC subway system's new hand sanitizer network that detects when compartments need refills, working directly with client CEO.
- Designed central PCB board with EAGLE (Fusion360) for fire alarm detection product that went into production.
- Tested safety and temperature-maintaining capabilities of intravenous fluid warmer project to be used by hospitals in China.

### Summer Ventures in Science and Math

2021 - present

#### Team Lead and Researcher

- Built a machine learning model with 96% accuracy to predict pathogenicity of  $\alpha$ B-crystallin mutations for hereditary cataracts.
- Presented at State of North Carolina Undergraduate Research and Creativity Symposium (SNCURCS); approaching publishing.

### Fab Academy

January - June 2020

#### Graduate

- One of ~10 high school students worldwide to graduate 2020's Fab Academy, a 20-week professional-level engineering course run by MIT Professor Neil Gershenfeld covering topics like PCB design, embedded programming, and more.
- Completed 19 projects and successfully defended capstone project, Navimap, a commissioned interactive copper touch map.

### sheMakes

2020 - present

#### Founder and Executive Director

- Founded initiative that builds a collaborative space for female engineers, emphasizing education and exhibition.
- Oversee organizational operations, delegating tasks to a team of 7+ girls in program development, content research, etc.
- Organize Makeathon events; also design social media content, information campaign "Engineering 101" (read by 4,300+ people), and website with a frequently updated database of 70+ student-made projects to involve outside communities.

### Aid First Inc.

2017 - 2022

#### Founder and Executive Director

- Founded local 501(c)(3) non-profit that provides first aid supplies to local Charlotte, North Carolina shelters and crisis centers.
- Designed website, oversaw operations, and led a team of 13 people, delegating tasks for marketing, outreach, and partnerships.
- Fundraised \$2,950 and donated 13,100+ first aid items; worked with Charlotte Small Businesses Coalition and City Council.

## AWARDS

- American Computer Science League Senior 3 Division Finalist
- US Presidential Scholars Program Semi-Finalist
- National Speech and Debate Association Academic All American; Top 8 in the Nation for World Schools 2021 and 2022

## SKILLS

**Technical:** Java, Python, C++ | Fusion360, PCB Design and Production, Arduino | 3D Printing, CNC Machining, LaTeX, Excel

**Language:** Fluent English, Conversational Chinese and Spanish

**Interests:** Micro/Electrical/Nano Engineering, Product Management, Product Design, Ethics, Public Policy, Sketching, Running