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, Minor in Philosophy, GPA: 4.5/5.0
- Clubs and Activities: Sloan Business Club DEI Director, Contrary Capital Venture Partner, Chinese Student Club Exec Board
- Relevant Courses: Computation Structures, Introduction to Algorithms, Linear Algebra, Fundamentals of Programming

Charlotte Latin School | Charlotte, NC — **August 2018 – May 2022**
- SAT: 1580, GPA: 4.8/4.0 weighted
- *Awards and Leadership*: Student Body President, Speech and Debate Team Captain, CLS Cum Laude Society

EXPERIENCE

VIA Technologies | Taipei, Taiwan — **June 2023 – August 2023**
Software Engineer - Deep Learning Intern
- Optimized data augmentation methods with Kornia and wrote Python data sub-setting script to maintain nuScenes category distributions used for BEV (Bird's Eye View) perception model training, improving mAP by ~15% and speed by ~10%
- Built Python inference visualization feature, outputting BEV visualizations from six camera images of a construction vehicle

Enventys Partners | Charlotte, NC — **May 2022 – July 2022**
Engineering Intern
- Programmed IoT hand sanitizer usage management interface using C++ and Particle that detects when compartments need refills, worked directly with client CEO and to be deployed across NYC subway hand sanitizer network of 400+ stations
- Designed central PCB board with EAGLE (Fusion360) for fire alarm detection product, currently in production

Fab Academy | Charlotte, NC — **January 2020 – June 2020**
Graduate
- Built 19 projects and defended capstone project, an interactive IoT capacitive touch map, for the professional-level engineering and rapid prototyping course run by MIT Professor Neil Gershenfeld based on the course How to Make (Almost) Anything

RESEARCH AND TEAMS

Prod | Remote — **June 2023 – September 2023**
Cohort 3.0 Admin
- Built initiatives to integrate founders of a $800M cohort valuation for Harvard/MIT Accelerator with mentors and alumni
- Spearheaded the alumni fundraising program; established relationships with CEOs of HubSpot and VC firms, to raise $160k

MIT Koch Institute for Integrative Cancer Research | Cambridge, MA — **January 2023 – May 2023**
Undergraduate Researcher
- Developed 5x more efficient fabrication process using micro hot plates and solder paste for first batch of micro-flexible PCBs used in controlled drug delivery smart capsules; also added temperature sensors to the original PCB design in Altium
- Spearheaded CAD design of catheter-rotating jigs for bioartificial pancreas therapies, enabling core leg of research to continue

University of North Carolina at Wilmington | Wilmington, NC — **June 2021 – December 2021**
Team Lead Researcher
- Built ML models using scikit-learn to predict pathogenicity of αB-crystallin mutations for hereditary cataracts with 96% accuracy. Investigated model architectures, optimized hyperparameters, and created open-source pathogenicity prediction tool

sheMakes | Charlotte, NC — **January 2020 – August 2023**
Founder and Executive Director
- Founded initiative that builds a collaborative space for female engineers; organized Makeathon events, designed information campaign read by 4,300+ people, and built website with a frequently updating database of 70+ student-made projects

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: Python, PyTorch, Sklearn, Java, JavaScript, C++, Linux, Git, Altium, SMD Soldering, 3D Printing, LaTeX, Excel
Language: Conversational Chinese and Spanish
Interests: Machine Learning, Computer Vision, Electrical Engineering, Microfabrication, Entrepreneurship, Ethics, Sketching