Andrea Leang

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Education

Massachusetts Institute of Technology — Cambridge, MA

Candidate for MEng. Electrical Engineering and Computer Science — *Expected Graduation: May 2026*

S.B. Electrical Engineering and Computer Science — *Class of 2025*

Minor in Business Analytics. GPA: 4.8/5.0

Relevant Coursework: Deep Learning, Multi-agent Learning, Artificial Intelligence, Large-scale Symbolic Systems, Design and Analysis of Algorithms, Design & Rapid Prototyping, Secure Hardware Design, System Dynamics, Robotics
Organizations: Gordon-MIT Engineering Leadership Program (GEL), Eta Kappa Nu (HKN), NCAA Women's Fencing, Women's Independent Living Group (WILG), MIT Anime Club, MIT EE Club (Voltage)

Relevant Experience

Co-Founder and CEO — Aug. 2023 – Present

Fencing Star U.S. Distribution — *Remote*

- Sold over 1000 pairs of fencing shoes, over $150,000 in revenue, captured 20% of the market, broke even year 1
- Cultivated and managed over 25 fencing clubs and NCAA fencing teams collaborations across North America
- Directed and managed company vision, national competition ventures, day-to-day sales, and graphic designs

Software Engineer Intern - Full Stack — June 2025 – Aug. 2025

Cambridge Mobile Telematics — *Cambridge, MA*

- Automated RoadClub users' hard-brake events processing with Postgres, Python, & AWS, improving data analysis
- Developed API handler and unit tests in Python to enhance date-specific hard brake summary retrievals from S3
- Implemented structure for API calls and UI for hard brake information in Swift, improving user interface clarity

Undergraduate Researcher — June 2024 – Aug. 2024

MIT Media Lab's Responsive Environments Group — *Cambridge, MA*

- Networked Electronic Textile Skin for VR/AR: Developed an Arduino and Unity system with length, slope, and object detection features to create a real-time 3D digital twin of a grid of 25 sensors embedded in stretchable fabric
- Designed robotics system: derived the digital fabric's position from physical, improving virtual display accuracy
- Engineered bi-directional data communication between Unity and Arduino for real-time control of robotic arms

Undergraduate Researcher — June 2023 – June 2024

Towards Microbial-Arduino Study at MIT LEMI — *Cambridge, MA*

- Automated transforming bacteria videos to statistics and animations with MATLAB, facilitating data analysis
- Implemented ML clustering techniques to characterize bacterial surface charge, improving data analysis accuracy

Extracurriculars

MIT Varsity Fencing | *4-time NCAA Regionals Qualifier, Pan-American Finalist* — Sept. 2021 – Present

- Squad Leader '22-'25: Led team through competitions and practices 10 hrs/wk against 21 NCAA teams
- US Fencing Coach Association (USFCA): Scholar of Distinction ('22, '23, '24, '25)

Mathematics for Computer Science / Intro to Algorithms | *Teaching Assistant* — Feb. 2024 – Present

- Taught probability, graph theory, and proof-writing skills 10 hr/wk to 900+ undergraduate and graduate students
- Led review sessions and 1-1 tutoring. Turned foundational concepts into digestible content for students of all levels

Publications

"Zeta potential characterization using commercial microfluidic chips" | *Coauthor* — Jan. 2024

"A comparison of point-tracking algorithms in ultrasound videos from the upper limb" | *Ack.* — May 2023

Skills

Coding Languages: Python, MATLAB, R, C++, HTML, CSS, Scheme, Minispec, Assembly, Arduino, Swift, Ruby
Technical Skills: LLM and ML Algorithm Design, Pytorch, Numpy, Nano-fabrication, Photolithography, DRIE, Robotics Simulation, PCB Design, System Diagramming, EDP Simulation, Hardware Attacks & Defenses, USACO Gold