ELENA SU

617-697-3895 ⋄ esu@mit.edu

EDUCATION

Massachusetts Institute of Technology *September 2021 - May 2025*
Bachelor's of Science in Electrical Engineering and Computer Science

Courses: Interconnected Embedded Systems, Computation Structures, Machine Learning
Activities: Lecture Series Committee, Electricity and Magnetism Teaching Assistant (spring 2022)

Brookline High School *September 2017 - June 2021*
High school diploma. GPA: 4.0/4.0
SAT: 1590/1600

RELEVANT EXPERIENCE

McGovern Institute Student Researcher *January 2022 - Present*

- Working with postdoctoral research fellow Dr. Quansan Yang to fabricate 3D structures with high refractive index nanoparticles for nanophotonics applications
- Goal: to attain a 27,000-fold reduction in overall volume

Noise Characterization Lab Assistant *January 2022 - Present*

- Measure the optical responsivity and frequency response of a mid-infrared PbTe photodetector to sense the presence of methane. PI: Dr. Anu Agarwal
- Working towards development of an experimental setup to measure noise power spectral density of the detector for varying modulation frequencies and voltage biases

OM1 Data Engineering Intern *June 2021 - October 2021*

- Loaded ePHI into the ingestion pipeline. Experience with data cleaning using Pandas; configuring ingestion using YAML; and verifying ingestion accuracy with SQL queries
- Platforms and software: AWS, GCP, Bash, Snowflake

PROJECTS

gbSTEM *March 2020 - Present*

- Founder and director of mathematics at a nonprofit which currently brings free math, computer science, and engineering courses to 600+ Boston-area students
- Helped code program website using Javascript and HTML/CSS; lead meetings, manage finances, and plan mathematics curricula for 94 instructors

International Young Researchers' Conference *March 2020 - October 2020*

- Conducted independent statistics research project re. prevalence of mental health conditions in adolescents. Experience with SQL, SAS, R
- Scripted and delivered a virtual 15-minute presentation at the International Young Researchers' Conference in October 2020

TECHNICAL ABILITIES

Proficient in Python, C, HTML/CSS, and SQL. Familiarity with TensorFlow, React, Git, and Bash.

AWARDS AND HONORS

3-time American Invitational Mathematics Exam (AIME) qualifier
AMC 10 Distinguished Honor Roll
Harvard-MIT Math Tournament November: 48th place overall
U.S. Presidential Scholar nominee
President's Volunteer Service Award Gold