

Darren Yao

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EDUCATION

Massachusetts Institute of Technology (MIT)

Cambridge, MA

Master of Engineering: Computer Science

Sep 2024 – May 2025

Bachelor of Science: Double Major in Computer Science and Mathematics

Sep 2021 – May 2025

- **Relevant Coursework:** Theory of Computation [Grad] (6.840), Computational Cognitive Science [Grad] (6.804), Advanced Natural Language Processing (6.806), Statistics, Computation, and Applications (6.419), AI, Decision Making, and Society (6.404), Algorithms II (6.046), Machine Learning (6.036), Fundamentals of Programming (6.009), Signal Processing (6.003) Probability and Random Variables (18.600)
- **Clubs and Activities:** HackMIT, Asian Dance Team, Associate Advisor, Theta Xi Fraternity (Recruitment Chair)

EXPERIENCE

Amazon

Boston, MA

Software Engineering Intern

Jun 2023 – Aug 2023

- Designed and implemented a new tool to automate the developer workflow of updating Amazon Alexa device metrics.
- Wrote scripts to automatically propagate developer changes in a metric across all data dashboards.
- Simplified process of manually updating dozens of dashboard pages to a single terminal command.
- Planned and architected features for metric alarms, test data dashboards, and integration into the software pipeline.

Seagate Technology

Fremont, CA

Software Engineering Intern

Jul 2022 – Aug 2022

- Worked on Iguazio and MLRun pipeline for machine learning and data engineering.
- Performed data cleaning and exploratory data analysis on dataset to predict hard drive failures using Python NumPy, Pandas, Matplotlib, and other data science libraries.

Euler Circle Mathematics Institute

Online

Student Researcher

Oct 2020 – Dec 2021

- Research project on bounding the worst-case behavior of random processes.
- Read papers and background material in linear algebra, probability theory, stochastic processes.
- Programmed simulations using Python NumPy library, analyzed statistical data, formulated and proved conjectures.

PROJECTS

hopscotch.nyc (developer)

2022

- Web app to help prospective NYC residents choose a neighborhood to live based on their preferences.
- Aggregated data into regions using Shapely computational geometry library, and performed data analysis using Pandas.
- Built as part of Hack Lodge, a highly selective immersive and intimate software development program for undergraduates.

Personal Website (developer)

2022

- Website built with HTML/CSS using Tailwind and Next.js frameworks, hosted at darrenyao.com.

Competitive Programming Initiative (co-founder)

2020

- Nonprofit organization to promote competitive programming among middle and high school students through resources, classes, outreach, and contests. Impacted tens of thousands of students.
- Restructured organization leadership for long-term stability; serving on board of directors to maintain continuity.

USACO Guide (co-founder)

2020

- Comprehensive collection of educational resources for the USA Computing Olympiad. Has 13 million+ page views.
- Lead author; wrote most of the content for Bronze and Silver sections.

NanoMath (founder, 2020-2021 tournament director)

2020

- Mathematical outreach organization that runs online math contests twice a year.
- During 2020-2021 season, managed staff team of 20+ members and organized contests with total 1000+ students attending.

AWARDS

USA Computing Olympiad Platinum: top 200 pre-college competitive programmers nationally

2020

4x AIME Qualifier, AIME Score of 9: top 0.5% of pre-college students in competition math nationally

2020