

# Darren Yao

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## EDUCATION

### Massachusetts Institute of Technology (MIT)

#### Master of Engineering: Computer Science

Cambridge, MA

Sep 2024 – May 2025

- GPA: 5.0/5

- Thesis: Applications of Graph Centrality to Software Dependency Graphs

#### Bachelor of Science: Double Major in Computer Science and Mathematics

Sep 2021 – May 2025

- GPA: 4.9/5

- Relevant Coursework: Advances in Computer Vision (6.869), Theory of Computation (6.840), Computational Cognitive Science (6.804), Advanced Natural Language Processing (6.806), Statistics, Computation, and Applications (6.419), Design and Analysis of Algorithms (6.046), Machine Learning (6.036), Signals, Systems, and Inference (6.011)

- Clubs and Activities: Chamber Music Society, MIT Climbing Team, HackMIT, Asian Dance Team, Theta Xi Fraternity (Recruitment Chair), Associate Advisor, HKN Honor Society

## PROFESSIONAL EXPERIENCE

### Amazon

Seattle, WA

#### Software Engineering Intern

May 2024 – Aug 2024

- Designed and implemented automatic syncing service for the Alexa Shortcut Panel application on new FireTV C++ operating system.
- Wrote parser to process configuration files from the cloud into UI tiles and icons.
- Defined application metrics schema, created metrics collection client, and implemented all necessary stability metrics.
- Migrated application to new logging system.
- Served as onboarding contact for new software engineer; helped with developer environment setup and metrics design.

### Amazon

Boston, MA

#### Software Engineering Intern

Jun 2023 – Aug 2023

- Introduced a new metric schema file format to automate the developer workflow of updating Amazon Alexa device metrics.
- Wrote Python 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.
- Architected features for metric alarms, test data dashboards, and integration into the software pipeline.

### Seagate Technology

Fremont, CA

#### Software Engineering Intern

July 2022 – Aug 2022

- Built components of Iguazio/MLRun pipeline for data engineering.
- Performed data cleaning and exploratory data analysis to predict hard drive failures using Python NumPy, Pandas, and Matplotlib.

## ACADEMIC EXPERIENCE

### Head Teaching Assistant, 6.1200 Mathematics for Computer Science

Spring 2024, Fall 2024

- Managed administrative responsibilities for course of 400 students, including section assignments, exams, and student questions.
- Taught twice weekly recitation sections; held office hours to assist students with problem sets and conceptual understanding.
- Authored problems and solutions for problem sets and exams

### Course Co-Director and Instructor, 6.s095 Probability Problem Solving

IAP January 2024

- Organized student-taught probability course of 200 students.
- Recruited, interviewed, and managed course staff; delivered lectures and recitations.

## 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.

### 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.
- Led the creation of USACO Guide, a comprehensive collection of educational resources for the USA Computing Olympiad, which has over 15 million page views.
- Restructured organization leadership for long-term stability; served on board of directors to maintain continuity.

## AWARDS

Neo Scholar Finalist: selected as one of 150 candidates for Neo mentorship program and community

2023

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

2020