

Yihan Shi

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Education

Thayer School of Engineering at Dartmouth
Master of Engineering in Computer Engineering

Hanover, NH (Remote)
Expected Jun 2026

Duke University
Bachelor of Science (cum laude); Major in Statistics with High Distinction

Durham, NC
Aug 2019 – May 2023

Experience

The Brookings Institution, Center on Health Policy

Senior Research Assistant

Washington, DC
Aug 2024 – Present

- Co-authored research papers and comment letters with economists and lawyers on the Inflation Reduction Act, pharmaceutical import security investigations, and health insurance price transparency
- Built a data pipeline integrating historical FDA drug data and developed a dashboard visualizing U.S. drug shortage trends
- Led the full intern hiring process and provided mentorship and supervision to the 2 selected interns

Mastercard Data & Services

Software Engineer

Arlington, VA
Aug 2023 – Aug 2024

- Led an innovative research project using artificial neural networks to predict counterfactual campaign outcomes
- Built full-stack web application features to serve enterprise customers such as McDonald's, Walmart, and BoA
- Partnered with UX designers to revamp the application frontend to meet industry-leading accessibility standards

Duke University, Department of Statistical Science

Undergraduate Research Assistant

Durham, NC
Aug 2021 – May 2023

- Co-authored an internal tutorial on recurrent event analysis examining alcohol-related complications after bariatric surgeries
- Investigated algorithmic bias of inappropriate proxy variables in Electronic Health Record data using simulation

Undergraduate Teaching Assistant

Aug 2022 – Dec 2022

- Held weekly office hours to help more than 70 students understand statistics concepts and answer coding questions
- Guided 2 teams of students in the design of a data analysis project, which involved cleaning online datasets, generating hypotheses, and evaluating statistical models

Carta Healthcare

Data Science Intern

San Francisco, CA
May 2022 – Aug 2022

- Built a client-facing dashboard tracking hospital performance metrics and presented it in a live product demonstration
- Created a reusable template that enabled engineers to auto-generate webpages for a machine learning workflow
- Implemented an automated data-cleaning pipeline that reduced bioinformaticians' housekeeping time by 30%

Duke University School of Medicine

Summer Research Fellow

Durham, NC
May 2021 – Aug 2021

- Co-led a team of 3 undergraduate and postdoc students to develop a rare disease genomic data science project
- Identified 20+ significant genes associated with a rare neurological disorder from a pool of 35,000 using statistical methods
- Mentored 2 incoming first-year researchers and designed introductory biomedical data science projects

Pea Rare Disease Initiative

Volunteer

Shanghai, China
Jul 2020 – Jan 2021

- Created quarterly social media newsletters to promote rare disease literacy in China
- Analyzed trends in U.S. orphan drug development using FDA approval data to inform patient families

Skills and Interests

- **Languages:** Mandarin Chinese (native), Japanese (intermediate)
- **Technical Skills:** Python, R, SQL, C#, C, Java, Assembly, JavaScript, CSS, HTML, L^AT_EX
- **Interests:** Photography, Piano, Pilates