

# Yihan Shi

☎ (919) 884-0734 | ✉ yihan.shiwork@gmail.com | 🔗 linkedin.com/in/yihan-shi | 🌐 github.com/ys262

## Education

### Duke University

Durham, NC | May 2023

*B.S. in Statistics (High Distinction), Minor in Computer Science & Neuroscience* | GPA: 3.93/4.00, Cum Laude

- **Relevant Coursework:** Data Structures and Algorithms, Computer Systems, Artificial Intelligence, Advanced Data Visualization, Probability, Bayesian Methods & Statistics, Statistical Inference, Regression Analysis, Machine Learning

## Skills & Languages

**Programming languages:** Python, Java, C, ASM, R; **Database:** MySQL, PostgreSQL, SQLAlchemy; **Development:** HTML, CSS, Javascript; **Tools:** Git, dvc, AWS S3, Jenkins, Figma, Jira; **Languages:** English, Mandarin Chinese, Japanese

## Work Experience

### Carta Healthcare | Data Science & Engineering Intern

San Mateo, CA | May – Aug 2022

- Defined and developed key metrics in data visualization dashboards; Collaborated with Product and Sales team to present dashboards at a client-facing Product Demo (**Python**)
- Implemented comprehensive & robust data cleaning process to reduce platform test errors systematically, reducing 30% of the time bioinformaticians spent on housekeeping tasks (**Python, Pandas**)
- Built, maintained, debugged infrastructure that streamlined and scaled 100x patient profile simulation based on real-world distribution to reduce manual labor (**Java, Python**)
- Designed **SQLAlchemy** wrappers to scalably query OLAP multi-dimensional array of data in PostgreSQL databases (**Python**)
- Integrated FreeMarker API with machine learning pipeline to auto-generate free-text notes for NLP pre-training preparation (**Python, Java, HTML**)

### Duke University, School of Medicine | Summer Data Science Fellow

Durham, NC | June – Aug 2021

- Led a team of 3 undergraduate and postdoc students to craft a rare disease genomic data science project end-to-end; Identified 20 significant genes out of 35,000 using generalized linear model and effect size shrinkage (**Trello, R**)
- Publishing a manuscript (under review) and designing future research projects with clinical researchers and pediatricians
- Mentored 2 incoming first-year researchers and drafted biomedical data science starter projects (**R, Linux**)

### Duke University, Statistical Science Dept. | Research & Teaching Assistant

Durham, NC | Aug 2021 – May 2023

- Authored technical tutorial for doctors on recurrent event survival analysis methods to examine large claim datasets (**R**)
- Authored manuscript [in review] on the impact of confounding medical interventions in electronic health records data (**R**)

## Technical Project

### DukeHub Student Portal 3.0

Sep – Dec 2021

- Identified user (student, IT staff, professor) needs iteratively through campus-wide surveys and created an **R Shiny** app that aims to improve user experience of picking classes compared to the current student portal DukeHub 2.0
- Provided insights to 2408 Duke courses through interactive data visualization features including enrollment cap comparison, diversity of the subject areas, and expected traveling route and time on weekdays
- Designed and implemented frontend interfaces (i.e. type boxes, drop-down lists) and connected backend server to Google Maps API
- Selected as a key project by Duke Office of Information Technology and Code+ summer program; 2 design & feature improvements were adopted in the new version of student portal

## Leadership and Extracurriculars

### Duke Technology Scholars Program, Duke University

Vice President & Scholar

Jan 2021 – Jan 2023

- Managed 5 tech interest groups (Health-tech, Tech for Social Good, Data Science, etc) with 170+ students
- Recruited 9 small group leaders and mentored them on brainstorming & planning events, creating social media campaigns, and tracking goals effectively; Oversaw 8 events in 2022 such as food for thought, technical workshop, and lunch with industry professionals

### International Association, Duke University

Vice President of Policy

Aug 2019 – Aug 2022

- Co-founded Duke International Alumni Affinity Group as a global platform of 1350+ alumni by collaborating with the advisory board of Duke International Alumni Committee
- Launched yearly panels and events on topics like international students' well-being and OPT/CPT training by cooperating with Duke Counseling & Psychological Services, Visa Services, and Career Center to help students navigate campus resources