Zhonghui (Helen) Du

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EDUCATION

Brown University — Providence, RI
M.S. in Computer Science — Expected May 2024
GPA: 4.0; Courses: User Interfaces & User Experience, Data Engineering

Carleton College — Northfield, MN
B.A. in Physics — Aug 2018 - Jun 2022
GPA: 4.0; *summa cum laude*; Phi Beta Kappa; distinction in major
Courses: Artificial Intelligence, Data Visualization, Algorithms, Programming Languages, Computer Systems

SKILLS

Programming Languages: Python, JavaScript, HTML, CSS, C, Java
Technologies: React, Flask, SQL, MongoDB, Google Cloud, Bootstrap, Pandas, Jest, Selenium, D3

RELEVANT WORK EXPERIENCE

Technology Policy Institute (TPI) — Remote
Software Engineering Intern — Jun 2022 – Aug 2022
- Implemented an interactive choropleth map with **React** and **Mapbox GL JS** that displays statistical data fetched from **Flask** and **GraphQL** endpoints, as part of a pioneering platform that helps policymakers and researchers visualize broadband usage data from 10 sources at 21 geographic levels
- Ensure site reliability for deployment by developing unit and integration tests for both client- and server-side code with **Jest**, **React Testing Library**, and **Pytest**

Carleton College, Academic Technology — Northfield, MN
Data Engineering Intern — May 2021 – May 2022
- Collaborated closely with a political science research group for research data management; expedited their work efficiency by overhauling the data collection, cleansing, and storage pipeline
- Increased scraping speed of news videos & transcripts by 30% by restructuring and optimizing **Selenium** and **Pandas** scripts
- Delivered new research material by cleaning and conglomerating 40k+ rows of raw research data spanning four years with **OpenRefine** and **Pandas**

Major League Hacking Fellowship — Remote
Software Engineering Fellow — Nov 2021 – Dec 2021
- Designed and implemented a weather-based song recommendation application in a 12-person team
- Integrated maps for location selection and display using **React Leaflet** and interaction with open APIs

Carleton College, Department of Physics — Northfield, MN
Astrophysics Research Assistant — Mar 2019 – May 2020
- Developed 10 new features and algorithms for ionospheric rotation calculation with **NumPy** and **SciPy**
- Created visualizations from 90 GB of data for timing anomaly investigations using **Matplotlib** and **IDL**

PERSONAL PROJECTS

Ice Cream Catalog Website | HTML, CSS, JS, Flask, PostgreSQL, Heroku — May 2021
- Worked in an Agile team to build a full-stack web application for searching ice cream products from a SQL database with filtering and sorting functionalities, and deployed the application to Heroku

TCP/IP Chat Room | C, Multi-thread, Socket Programming — Jul 2021
- Created a command-line chatroom application based on TCP/IP that allows multi-client conversation

VOLUNTEER ACTIVITIES

Vagina Project - Writer — Jun 2020 – Aug 2021
- Wrote and translated articles on diversity issues in STEM profession and education, read by 10k+ across social media platforms in China