

Brandon Wu

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EDUCATION

Brown University, A.B. Computer Science, GPA 4.00/4.00

Providence, RI | **Expected Graduation May 2024**

Relevant Courses: Software Engineering, Computer Systems, Program Design with Data Structures and Algorithms, Data Science, Real-Time and Embedded Software, Software Security and Exploitation, User Interfaces and User Experience

WORK EXPERIENCE

Industrial Economics Inc, Software Engineer Intern

Cambridge, MA | June 2023 – September 2023

- Developed new UI features for BenMAP, an air quality benefits mapping tool for the EPA, collaborating with air quality experts to identify important features and communicating timelines through Agile methodology
- Created new API methods utilizing JOOQ to allow users to upload custom files such as mortality and air quality data
- Implemented a feature that allows for crosswalking between different grid systems using PostGIS and Geotools, removing the need for users to find geographically-compatible datasets

Core & Initials, UX Design Intern

Tokyo, Japan (Remote) | June 2023 – September 2023

- Established a design system for an English-learning mobile app using Adobe XD and Figma and created prototypes
- Designed English version of the website for three different user categories: general app users, internal corporate use, and content creators who post English-speaking videos to the platform

Full Stack At Brown, Project Manager/Developer

Providence, RI | March 2022 – Present

TA Hours Website

- Led a team of developers working on a CS department website that handles queue of students seeking TA assistance
- Communicated with CS professors to identify expected features and budget limitations for an SMS notification system
- Implemented SMS notification system using Twilio to alert students, decreasing missed TA appointments by 30%

Families and Schools Research

- Managed a group of eight developers and three designers to develop a website for a research group studying the effects of parent-student relationships on academic performance, improving outreach and accessibility of information
- Effectively communicated with client to understand project goals and receive iterative feedback

Engineering Course Website

- Prototyped a design for a course website using Figma, including a project showcase page highlighting students' work
- Developed endpoints for professors and teaching assistants to update the assignments and lectures on the website

PROJECTS

Miniature Library

Fall 2024

- Led the development of a miniature replica of Brown University's Sciences Library, integrating IoT capabilities using Arduino and ESP8266 platforms, and utilizing serial and WIFI communication between our hardware
- Engineered LED window lights controllable via a user-friendly web app, enhancing user interaction and functionality
- Implemented the classic Snake game in C++ , enabling LED-based gameplay controlled through the web interface, and incorporating watchdog timers and ISRs for system reliability.

Movie Streaming Recommender

Spring 2023

- Utilized statistics and machine learning algorithms to analyze three movie datasets joined using SQL
- Tested research hypotheses concerning the relationships between streaming accessibility, language accessibility, and ratings
- Implemented a k-means clustering algorithm to automate a recommender for streaming services based off movie preferences

NYC Education Disparity Map

Fall 2022

- Collected data such as school funding, graduation rates, and student demographics from various APIs and reached out to NYC parents for input with a group of three other students
- Developed an interactive front end using React in order to provide parents, teachers, and policymakers in NYC an easily navigable display, utilizing Mapbox to map out the data by region

LEADERSHIP

Brown Computer Science Department, Undergraduate Teaching Assistant

Providence, RI | April 2023 – Present

- Prepared lesson plans and assignments for "The Digital World" class to effectively teach over 200 students about Excel, HTML, CSS, Javascript, and Python, holding office hours and gear-ups to provide conceptual and debugging assistance
- Organized course logistics by coordinating with a team of ten teaching assistants and the course professor

Brown Meiklejohn Program, Advisor

Providence, RI | August 2022 – Present

- Helped first years with the move-in process and class registration logistics such as the open curriculum and grading options
- Informed students of school resources such as tutoring programs, clubs for certain identity groups, and career advisors

SKILLS & INTERESTS

Skills: Java, Python, HTML, Javascript, CSS, React, C, C++, SQL, Figma, Balsamiq, MatLab, InDesign

Languages: Cantonese Chinese (Fluent), Mandarin Chinese (Conversational), Spanish (Conversational)

Interests: slacklining, rock climbing, volleyball, cooking, tennis, musical instruments, skiing