

Allen Wang

Diamond Bar, CA 91765 | E-Mail: allen_wang1@brown.edu | Website: allenwang.co | Github: <https://github.com/allenwang1536>

EDUCATION

Brown University, Providence, RI

Expected Graduation: **May 2026**

Sc.B. in Applied Mathematics-Computer Science

GPA: 4.00/4.00

Relevant Courses: Database Management Systems (*Teaching Assistant*), Software Engineering, User Interfaces and Experience, Computer Systems, Deep Learning, Machine Learning, Data Structures and Algorithms, Discrete Structures, Linear Algebra

Skills: Python, Java, JavaScript, React, Node, TypeScript, REST, GraphQL, Kafka, Swagger, Postman, SQL, NoSQL, Mockito, JUnit, Playwright, Spring Boot, Flask, Docker, OpenShift, Gloo Gateway, Git/Gitlab, C, C++, Go, Azure, Pytorch, Tensorflow

Business Acumen: Project Management, Stakeholder Communication, Agile Methodologies, UI/UX Design, Presentation Skills

EXPERIENCE

USAA Bank, Software Engineer Intern

May 2024 – Present

Java, Spring Boot, GraphQL, REST, ReactJS, Mockito, Kafka, Swagger, Envoy, Gloo, OpenShift/Kubernetes

- Project 1: Integrated view / sync functionality for legacy Mainframe database of 13 million records into troubleshooter tool
- Reduced troubleshooting time by ~20 minutes daily per CBT troubleshooter and saved 2 weeks of potential delays
- Project 2: Developed new feature allowing developers to directly emit schema-validated Kafka events to topics
- Streamlined the testing process and enhanced efficiency for developer testing workflows

Wingspans (Techstars' 24 startup), Software Engineer Intern

May 2023 – May 2024

Gatsby, Node.js, React, Typescript, CSS, Firebase, Algolia, Cosmic

- Fully owned and launched gamification feature to 50,000+ users, boosting user engagement time by 71%
- Engineered adaptive feedback loop enabling users to like/dislike 10+ careers suggestions to refine recommendations
- Developed resume optimization tool using large language models to tailor resumes to specific job postings

Brown University CS Department, Software Developer

January 2023 – August 2023

Next.js, React, TypeScript, MUI

- Developed internal tool to address inefficiencies in lab time assignments, streamlining and standardizing class management
- Created custom frontend for managing lab times and grades for 600+ people classes, reducing administrative burdens

Brown Data Science Institute Lab, Machine Learning Research Assistant

March 2023 – August 2023

Python, Pandas, OpenAI

- Worked with team of 6 to address biases in large language models and ensure fairness in automated decision tasks
- Applied prompt engineering on US Census data to optimize prompts, enhancing prediction accuracy and minimizing biases

PROJECTS

AeroForecast, *Pytorch*

April 2024 – May 2024

- Designed CNN-LSTM/Transformer and ConvLSTM weather prediction models, capturing complex spatiotemporal patterns
- Processed 5D meteorological data from ECMWF ERA5, predicting 12 features (wind, pressure, etc) across a global grid
- Tuned hyperparameters to achieve testing loss of 0.0002598 and accuracy of 93.69%

SpotiDuo, *TypeScript, Java, Spark, Azure, Spotify*

November 2023 – December 2023

- Developed music-based language learning app rooted in research highlighting music's role in boosting retention, featuring karaoke-style lyric input alongside real-time translations for over 150 native dialects (supported through Azure)
- Crafted tiered difficulty system for lyric interaction and implemented Levenshtein algorithm for accuracy assessment
- Delivered personalized song recommendations based on user's initial selection, utilizing 20+ attributes (energy, mood, etc)

Interactive Maps Data Visualization, *TypeScript, Java, Spark, JUnit, Jest, Playwright*

August 2023 – November 2023

- Integrated Mapbox with GeoJSON data overlay, allowing users to interact/visualize historical redlining data
- Developed web API server (optimized with caching), enabling users to query relevant data in CSV/JSON formats
- Applied comprehensive testing using TypeScript/Java (unit, integration, property, fuzz) to ensure secure/reliable performance

ORGANIZATIONS

Full Stack at Brown, *Vice President*

September 2022 – Present

- Led and mentored teams of developers, designers, and project managers, ensuring successful execution of 10+ web projects
- Hosted weekly events and workshops for 100+ members, fostering skills in web development and project management

Brown University Database Systems Course, *Teaching Assistant*

May 2024 – Present

- Enhanced student learning through timely feedback and assistance during office hours and one-on-one sessions
- Developed and refined course materials for 80+ students, coordinating weekly projects and quizzes to reinforce learning