

Gavin Zhang

LinkedIn: gavin-x-zhang
GitHub: GavinXZhang

Email: gwxyzhang@bu.edu
Mobile: +1 617-792-0023

EDUCATION

- **Boston University** Boston, MA
Bachelor of Arts: Computer Science, Minor in Entrepreneurship *Jan. 2025*
 - **Courses:** Computer Systems (C/C++), Analysis of Algorithms, Database Systems (SQL, NoSQL), Foundations of Data Science, Artificial Intelligence, Full-Stack Software Engineering, Linear Algebra, Probability

SKILLS

- **Languages:** Python, Java, Javascript, Typescript, R, SQL, L^AT_EX, Kotlin, HTML, CSS
- **Tools:** Linux, AWS, Azure, GCP, Docker, Heroku, MongoDB, Next.JS, Jupyter Notebook, React, Django, Git, Node.js, Express

WORK EXPERIENCES

- **Flare Therapeutics** Cambridge, MA
Data Science Intern *Jan. 2024 – Oct. 2024*
 - **Data Management:** Developed and implemented a scalable data processing pipeline using R and RStudio to process and organize scRNA-seq datasets and associated metadata in the absence of existing tools or dedicated personnel. Enabled analysis for over 30 distinct cancer studies. Resulted in cost savings of \$5,000 by eliminating the need for external services.
 - **Documentation:** Streamlined codebase organization and documentation for bio-analysis applications by implementing structured comments and annotations, enhancing maintainability and readability.
- **Boston Children's Hospital X BU Spark!** Boston, MA
Software Engineer *Sep. 2023 – Dec. 2023*
 - **Frontend:** Designed and implemented a save progress feature using React, integrating with Strapi to store the current node ID and preserve user progress within a decision tree. Addressed the critical issue of data loss upon user disconnection, enhancing user experience and reliability. This solution led to a 20% increase in return users.
 - **Backend:** Developed a specialized decision tree application utilizing MongoDB for data storage and Strapi for content management, enabling ALS patients to identify personalized solutions tailored to their unique cases. This solution significantly improved accessibility and usability for patients.
 - **Project Management:** Implemented Agile, Sprint, and Scrum methods in collaboration with 3 software engineers, leading to enhanced communication, clear goal-setting, and effective team coordination.
 - **Demo:** Increased awareness of ALS resources by showcasing a website at BU's Demo Day, attracting interest from over 100+ attendees and highlighting patient needs.
- **Flare Therapeutics** Cambridge, MA
Data Science Intern *Jun. 2023 – Sep. 2023*
 - **Data Management:** Enhanced data processing efficiency by developing custom scripts for handling 10 sc-RNA sequencing datasets within 3 months, utilizing RStudio for de-multiplexing and protein analysis.
 - **Informational Technology:** Resolved computational errors and optimized workflows for a 50-member company by managing Linux systems and leveraging AWS cloud services. Troubleshoot and streamlined complex company documents, improving operational efficiency by 20%. Enhanced system reliability and reduced downtime through proactive monitoring and issue resolution.
 - **Publication:** Second author. Leveraged Cellenics data analysis insights to create detailed box diagrams from single-cell RNA sequencing data using Prism. Research presented at American Association for Respiratory Care (AARC) conference.

ACADEMIC PROJECTS

- **BU Market:** Developed an Android marketplace app for BU students using Kotlin and Android Studio. Built a dynamic UI with Stateful and Lazy Columns, integrated Firebase for authentication and real-time data, and utilized Jetpack libraries and Retrofit for scalable architecture and API interactions. Improved app performance by 30% and increased user engagement by 25%.
- **AI Personal Assistant:** Developed a personal productivity website using Django to track my To-Do's and generate a summary of my day using ChatGPT integration. Designed 3 models (Event, Reminders, and Call Logs) with respective forms for CRUD operations. Deployed application onto Heroku for live accessibility.
- **Personal Website:** Developed a responsive portfolio with Next.js, TypeScript, and Tailwind CSS, featuring dynamic project filtering, Firebase backend integration, blog/contact forms, SEO optimization, dark mode, and lazy loading; deployed via Vercel CI/CD with a 95+ Lighthouse performance score.
- **Daily Task Manager:** Developed a full-stack task manager using React and Node.js, deployed on GCP Cloud Run and Firebase Hosting. Engineered secure user authentication with Firebase and JWT, and optimized PostgreSQL queries for scalable data handling. Containerized the backend with Docker and implemented CI/CD pipelines to streamline deployment workflows.