Joshua Liu

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EDUCATION

BRANDEIS UNIVERSITY
BS in Computer Science
BS in Applied Math
Dean's List (All Semesters)
Expected May 2026 | Waltham, MA
Cum. GPA: 3.9

LINKS

Github:// **joshliu14**
LinkedIn:// **joshuagliu**
YouTube:// **joshualiu14**

COURSEWORK

UNDERGRADUATE
Data Structures and Algorithms
Operating Systems
Advanced Algorithms
Database Management Systems
Fundamentals of Software Engineering
Web Application Development
Convex Optimization
Distributed Systems

SKILLS

PROGRAMMING
Java • Shell • JavaScript • Matlab
HTML • Python • SQL • LaTeX • C
C++ • CSS • TypeScript • Swift • Go

FRAMEWORKS
React.js • Node.js • Express.js
MongoDB • Flask • PyTorch
Vue.js • TensorFlow • FastAPI

TOOLS/SOFTWARES
Github • Git • Docker
Azure • VS Code • Sourcetree
Jira • Eclipse • Firebase

OTHER

TEACHING ASSISTANT
Teaching assistant for advanced Java course responsible for grading and leading office hours.

BUGS TUTOR
Brandeis University Study Group (BUGS) Tutor for Python, Java, and Data Structures and Algorithms courses

EXPERIENCE

THE COMMONS XR | Data Engineer and DevOps Intern
June 2024 – Sept. 2024 | San Diego, CA
- Directed daily standups. Designed and implemented testing environment with automated GitHub Actions CI workflows, boosting testing and code merging efficiency by 20%.
- Developed a high-impact automated Power BI dashboard refresh solution using Azure Logic Apps, increasing session efficiency by 30%.
- Engineered and tested a new schema to enhance relationship modeling and integrate additional software-generated data.

BOSTON COLLEGE (CV DEPT.) | Fullstack Engineer Intern
June 2023 – Aug. 2023 | Chestnut Hill, MA
- Full Stack Intern under **Donglai Wei**, contributing to a neuron segmentation and labeling **web app** built in React.js (front end) and FastAPI (back end).
- Designed and implemented feature for temporary and permanent file labeling, helping clients better manage high-resolution neuron images.
- Developed a multi-tab visualization feature for neuron analysis, enabling concurrent instances of **Neuroglancer** and boosting user productivity by 50%.

PROJECTS/RESEARCH

THE CORE MACHINE LEARNING LAB | Undergrad Researcher
June 2024 – Present | Waltham, MA
- Working with **Hongfu Liu** to research data used for training and evaluations to improve ML models.
- Currently researching feature selection for the wrapper method by leveraging influence functions.

BRAVA LAB | Undergrad Researcher
Dec. 2024 - Present | Waltham, MA
- Working with **Dylan Cashman** to research LLM visualization to improve human computer interaction.
- Performing qualitative research using grounded theory to build a tool which leverages LLM visualizations to improve job hunting process.
- Building career support tool for students using React and Google Gemini and visualizing output based on research.

TRAVELMUG
Dec. 2023 - May 2024
- Developed a unique and scalable coffee website using React.js, Redux, and Firebase which recommends cafes based on specific coffee preferences such as country, elevation, roasting/brewing methods and more.
- Containerized the application with Docker and set up automated testing and deployment (CI/CD) with GitHub and Azure.

BRANDA
August 2024 - Present
- Swift Developer for University IOS app coding features that utilize different API such as Google Maps.
- Developed university academic calendar and library hours integration and ability to submit and store RSVP requests for different events.
- Refactored code, improving code space and time efficiency by 10%.