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
Algorithms
Database Management Systems
Fundamentals of Software Engineering
Web Application Development

SKILLS

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

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

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

OTHER

TEACHING ASSISTANT
Teaching assistant for COSI 12B (Advanced Programming Techniques in Java) responsible for grading and leading office hours.

BUGS TUTOR
Brandeis University Study Group (BUGS) Tutor for COSI 10A (Python), COSI 12B (Java), and COSI 21A (Data Structures and Algorithms)

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 deployed a virtual machine port to support new data types, enabling seamless data integration and expanding system capabilities.

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%.

PROSCOUT.AI | Software Engineer Intern
Sept. 2024 – Dec. 2024 | Remote
- Developed a React dashboard to streamline system operations, reducing deployment time by 50% while enabling remote control and monitoring.
- Built and deployed a Raspberry Pi-based camera system for real-time image capture and analysis using OpenCV.
- Architected a scalable, high-performance cloud infrastructure by integrating Google Cloud, BigQuery, and Cloud Functions.

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 inference functions.

BETTER THAN SHERM
Jan. 2024 - May 2024
- Full-stack recipe-sharing app with Express.js (RESTful API) and React.js (frontend) supporting 50+ users.
- Containerized with Docker, deployed on Azure with CosmosDB, and implemented smoke testing.
- Automated testing, building, and deployment for 150+ commits via a CI/CD pipeline using GitHub Actions.

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 with GitHub and Azure.