

Austin Liu

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EDUCATION

Brown University

Providence, RI

B.S. in Applied Math and Computer Science, B.A. in Economics

May 2027

- Relevant Coursework: Operating Systems, Computer Systems, Deep Learning, Foundations of AI, Data Structures and Algorithms, Design/Analysis of Algorithms, Statistical Inference I/II

WORK EXPERIENCES

Symbotic

May 2025 - August 2025

Software Engineer Intern

Wilmington, MA

- Incoming Summer 2025, Data Services

Helios Technologies

February 2025 – May 2025

Software Engineer Intern

Remote

- Prototyped **self-hosted GraphRAG** with vector database, enabling faster querying in **LLM workflows**
- Built internal moderation tool with **1000+ entries**, using virtualized lists to optimize for low-latency updates
- Managed **AWS** services (Lambda, AppSync, DynamoDB) for fullstack app used by **1,000+ users**

SAI (Study AI)

November 2024 – January 2025

Software Engineer Intern

Remote

- Integrated AI with **learning management systems** across **20+ universities**, enhancing studying engagement
- Optimized **RAG pipelines** using **React Flow**, enabling **diagram generation** for complex workflows

Stealth Startup

June 2024 – September 2024

Software Engineer Intern

Remote

- Engineered backend architecture for a **web app** using **Firebase NoSQL** and **NodeJS**, improving scalability
- Successfully conducted a **pilot run** with **30+ users**, improving user experience based on initial feedback

PROJECTS

Beya, Founding Software Engineer | *React Native, Expo Go, Firebase, AWS*

November 2024 - Present

- Generated **\$5,000+** in revenue through SaaS mobile **tap-to-pay** between popup vendors on college campuses
- Built internal analytics tool, tracking **1,000+ user events**, enabling insights to optimize **proprietary AI model**
- Implementing custom **content management system** for **5+** clients, deploying **React** based websites

Pitch Detection and Notehead Detection in Sheet Music | *OpenCV, TensorFlow*

February 2025 - May 2025

- Processed **5000+ images** using **OpenCV** morphological operations, enabling efficient **feature extraction**
- Applied **watershed algorithm** to separate complex, closely related noteheads, enhancing segmentation reliability
- Trained binary-classification **CNNs** to identify noteheads (e.g. quarter, whole, half), achieving **90% accuracy**

Find My Food | *React, AWS, Flask, MySQL*

January 2024 - May 2024

- Developed **dining hall menu tracking project** with **200+ monthly visits**, improving dining experience
- Decreased **AWS** expenses by **87.5%** through automation of **RDS instances**, and temporary **NAT gateways**

LEADERSHIP

Backend Software Engineer

September 2024 – Present

Brown Formula Racing

Providence, RI

- Leading team of **10 engineers**, facilitating design discussions, delegating tasks, and **mentoring underclassmen**
- Created efficient **CI/CD pipeline** enabling seamless weekly deployments for both frontend and backend servers
- Managing **AWS** cloud infrastructure, deploying to **EC2** with load balancing and **S3** bucket for data storage

SKILLS AND INTERESTS

Languages: C++, Java, Python, JavaScript/TypeScript, C

Tools: GitHub, Firebase, Amazon Web Services (AWS), Google Cloud Platform (GCP), Azure, Hugging Face

Frameworks/Libraries: React, React-Native, Expo, NextJS, Flask, Django NodeJS, Socket.IO

Interests: Fingerstyle Guitar, Brown Men's Volleyball, Food, Sports