AUSTIN LIU

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EDUCATION

Brown University Providence, RI
B.S. in Applied Math-Computer Science, B.A. in Economics *2027* | **GPA** *3.9*
- **Relevant Coursework**: Operating Systems, Deep Learning, Data Structures and Design of Algorithms, Statistical Inference, Applied Ordinary Differential Equations, Computational Probability, Investments

WORK EXPERIENCE

Symbotic May 2025 - Current
Software Engineer Intern *Wilmington, MA*
- Effectively managing **20,000,000+** inventory items in Walmart warehouses using **C#** and **MySQL**
- Implemented database **health check procedures** to validate data integrity, sustaining error rates below **0.05%**
- Developed **C# application** following strict object-oriented design, deployed across **10+ sites** nationwide

Stealth Startup February 2025 - May 2025
Software Engineer Intern *Remote*
- Prototyped **self-hosted GraphRAG** with vector and graph database, enabling faster and more accurate querying
- Built internal moderation tool with **1000+ entries**, using virtualized lists to optimize for low-latency updates
- Managed **AWS services** (Lambda, AppSync, DynamoDB) and performed QA for web app used by **1,000+** users

PROJECTS

Beya, Founding Software Engineer | *React Native, Firebase, Pinecone, AWS* November 2024 - Present
- Developing custom **RAG** pipeline using **Pinecone** and **ChatGPT** to power **React CMS** for custom websites
- Generated **$20,000+** in annual recurring revenue through **SaaS** web solutions tailored for small-business clients
- Built internal analytics tool, tracking **1,000+** user events within iOS app to provide insights into user behavior

Guitar Tab Transformer | *React, Django, TensorFlow, Python* June 2024 - Current
- Modified **dadaGP open-source package** to support single-track guitar input, and irregular tuning transposition
- Benchmarked Hugging Face tokenizers (e.g. Word-level, WordPiece, BPN), adopted **WordPiece** for enhanced tokenization accuracy in development for **transformer model**

Virtual File System & System V File System | *C* April 2025 - May 2025
- Implemented **VFS** that routes core file operations (e.g., `lookup`, `create`, `unlink`) through an abstraction layer to the underlying kernel calls
- Developed the S5FS managing **indirect blocks**, **sparse blocks**, and **persistent storage** for on-disk files, with mutex locking to prevent race conditions

LEADERSHIP

Backend Software Lead September 2024 - Present
Brown Formula Racing *Providence, RI*
- Leading team of **10 engineers**, facilitating design discussions, delegating tasks, and **mentoring underclassmen**
- Collaborated with other **subteams** to gather requirements and translate into agile-style **Scrum Sprints**

SKILLS

Languages: Python, C#, C, C++, Java, JavaScript/TypeScript, SQL, CSS, HTML
Tools: XCode, Firebase, Amazon Web Services (AWS), Google Cloud Platform (GCP), Azure, Hugging Face, MySQL
Frameworks/Libraries: React, React-Native, Expo, NextJS, Flask, Django NodeJS, Socket.IO, .NET, ExpressJS
Interests: Fingerstyle Guitar, Brown Men's Volleyball, Food, Sports