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 Algorithms, Statistical Inference, Applied Ordinary Differential Equations, Computational Probability, Investments

WORK EXPERIENCE

Symbotic May 2025 - August 2025
Software Engineer Intern *Boston, MA*
- Refactored unbound queries in C# API into server-side execution, preventing full scans and reducing latency by **80%**
- Automated database health-check procedures to validate **20,000,000+** SKUs, maintaining data integrity at **99.95%**
- Deployed **C# application** to **10+** sites nationally, using OOP and MVVM design patterns for maintainability
- Optimized SQL queries with SQL Sentry Explorer, converting scans into index seeks to improve execution efficiency

Helios Technologies 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 for **1000+** characters, using virtualized lists to optimize for low-latency updates
- Maintained **CI/CD pipelines** and performed QA for web application serving **1,000+** users
- Automated scheduled messaging with AWS Lambda, SES, and CloudWatch, reducing manual operation overhead

PROJECTS

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
- Built **OpenCV–TensorFlow pipeline** to process **5,000+** music sheets using morphological operations
- Trained **CNNs** to identify noteheads (e.g. quarter, whole, half) and their pitches, achieving **95% accuracy**

Beya | *React Native, Firebase, Pinecone, AWS* November 2024 - Current
- Engineered **RAG pipeline** leveraging **vector databases** to provide operational context across all workflows
- Generated **$20,000+** in annual recurring revenue through **SaaS** web solutions tailored for **10+** clients

LEADERSHIP

Family Head November 2024 - Current
Chinese Student Association *Providence, RI*
- Led family group of **10 underclassmen**, organizing academic support and social activities to strengthen mentorship
- Organized **5+ cultural events** (e.g., boba workshops, Lunar New Year dinners) to foster community engagement

Backend Software Lead September 2024 - Current
Brown Formula Racing *Providence, RI*
- Led team of **10 engineers**, facilitating design discussions, delegating tasks, and **mentoring underclassmen**
- **Top 20 nationally**, collaborating with driving and car subteams to define requirements and lead **agile sprints**

SKILLS

Languages: Python, C#, C/C++, Java, JavaScript/TypeScript, SQL, CSS, HTML
Frameworks: React, Django, Flask, .NET, TensorFlow, OpenCV
Databases/Cloud: Firebase, Amazon Web Services, Google Cloud Platform, MySQL, Pinecone, Qdrant
Tools: Git, Docker, Hugging Face, Xcode, SQL Server Management Studio (SSMS), Postman
Interests: Fingerstyle Guitar, Brown Men's Volleyball, Steak and Sushi, Sports