

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, Machine Learning/Deep Learning, Data Structures and Algorithms, Statistical Inference, Applied Ordinary Differential Equations, Computational Probability, Investments

WORK EXPERIENCE

Symbolic

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 **React** moderation dashboard with virtualized lists, boosting efficiency and reducing render time by **65%**
- 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