

# Austin Liu

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## EDUCATION

### Brown University

Providence, RI

*Bachelor of Science in Computer Science and Economics with Entrepreneurship Certificate*

*Expected May 2027*

- Relevant Coursework: Statistical Inference I, Computer Science Integrated Introduction, Principles of Economics, Management of Industrial and Nonprofit Organizations

## EXPERIENCE

### Back End Developer

June 2024 – Present

*Stealth Startup*

*Remote*

- Designed and implemented backend architecture for an **MVP** utilizing **Firebase** for a **NoSQL database** to securely store user data, and **Node.js** to efficiently manage high-volume request handling
- Integrated backend with **third-party APIs** including the **Edamam API** to deliver comprehensive nutritional data and the **ChatGPT API** for advanced smoothie personalization

### Data Product Engineering Intern

February 2024 – May 2024

*MyDataProduct*

*Remote*

- Conducted **SPIKEs** on industry-standard APIs (e.g., **Google's NLP API**) and successfully integrated them
- **Automated** development operations to speed up weekly production deployments by creating a script for **GCP SSL certificate renewal**
- Designed **YAML** configuration files with consideration for the **downstream impact**
- Participated in **daily stand up meetings** and conducted **Quality Assurance (QA) reviews** on merge requests to enforce team practices and adherence to industry standards

### Research Assistant

September 2021 – May 2023

*Connected Autonomous Vehicular System Research Lab at University of North Texas*

*Denton, TX*

- Created Phantom Traffic Jam Project using **ROS** and **C++** to reduce congestion on roads
- **Mastered reactive methods** (i.e. PID controller, Wall Following, Follow the Gap) through F1tenth, creating a **complete Cooperative Car Following Model**
- **Honorable Mention** at 2nd Design Competition on Networked Computing on the Edge (International Postgraduate Student Competition)

## PROJECTS

### Guitar Tab Transformer | *React, Bootstrap, Tensorflow, Keras*

June 2024 - Current

- Used preprocessing techniques on state-of-the-art **DoReMi OMR (Optical Mark Recognition) dataset** (e.g. **one-hot encoding, normalization**) to prepare data/labels for **supervised learning**.
- Developed **Convolutional Neural Network (CNN)** to perform **binary and multiclass classification**.
- Developing a **Recurrent Neural Network (RNN)** to convert songs from **.mp3 files** into **guitar tablature**

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

January 2024 - May 2024

- Developed real-time **dining hall menu tracking project** with over **100 monthly visits**
- Designed **AWS Lambda** functions to automate the life cycle of **RDS instances**, and to set up temporary **NAT gateways**, significantly decreasing operational expenses by **87.5%**
- Created **Python** web scraper with **BeautifulSoup4** package, which runs weekly and asynchronously

## LEADERSHIP

### VP of Technology

September 2023 – Present

*Brown Technology Consulting Group*

*Providence, RI*

- Oversaw the **club's website** (using **React**) and provided **expert guidance** on all software-related inquiries
- Revamped **revenue model** for social media influencer marketplace startup by performing **competitor analysis**, assessing the current **value proposition**, and formulating detailed **recommendations**

## TECHNICAL SKILLS

**Languages:** C++, Java, Python, JavaScript, TypeScript HTML, CSS

**Frameworks:** React, ROS (Robot Operating System), Flask, NodeJS, Tensorflow, Keras

**Tools:** GitHub, GitLab, Ubuntu, Firebase, AWS, GCP