

BRIAN AHN

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Education

The University of Texas at Austin

August 2021 – May 2025

B.S. in Computer Engineering; track: Software Engineering

Austin, TX

Experience

o9 Solutions

November 2023 – January 2024

Software Engineering Intern | Python, Flask, Redis, NoSQL, JavaScript, Pandas, Postman

Dallas, TX

- Engineered a **generative AI conversational bot** to provide hardware metrics using function calling (with the OpenAI API) utilizing **redis** to store the past conversation to each user. **Used by 50+ companies.**
- Designed and implemented a **similarity search** using the chatbot's input at **95% accuracy**.
- Implement and tested the flow of prompts for the generated AI chatbot increasing the accuracy of user input by **110%**.
- Developed a **RESTful API** with endpoint implementation that generates dataframes of CPU and Memory usage.

Uber

May 2023 – August 2023

Software Engineering Intern | Java, Protobuf, Spring Boot, SQL, Docker, Kafka | Marketplace Team

Sunnyvale, CA

- Spearheaded a transaction **Analyzer**, providing insights into **key programming metrics** for the marketplace platform.
- Analyzes and processes over **1 million transactions** per second from the Spanner database and **decreases ~1 hour** of the engineer's time per use by providing read-after-write and gateway metrics. Used in workflow by **~500 engineers**.
- Revamped the Fulfillment Engineering database by utilizing Java to **enable independent configuration of over 4000** read-only and read-write pools, **reducing use of computing resources by 50%**.

Florida State University

May 2022 – August 2022

Software Engineering Research Intern | Python, NumPy, Matplotlib

Tallahassee, FL

- Optimized the **MUSIC algorithm** to calculate heart rate at **95% accuracy** from **real PPG data** by using data preprocessing techniques and linear algebra in python.
- Developed methods to compute the covariance matrix, noise and sound eigenvectors, and pseudospectrums **optimally**.

The University of Texas Health and Science Center

May 2020 – August 2020

Data Analyst Research Intern | SPSS, SAS

Houston, TX

- Merged several datasets using **SPSS and SAS** to generate descriptive statistics between Plasma BDNF and Pain.
- Applied **linear regression modeling** analysis to investigate the relationship between brain-derived neurotrophic factors and heat pain sensitivity resulting in a **publication** funded by the **National Institutes of Health**.

University of Houston

May 2020 – August 2020

Software Engineering Research Intern | Matlab

Houston, TX

- Led discussions in a **machine learning** group to implement **neural network algorithms** in stroke patients.
- Analyzed healthy subject data in **MATLAB** and ran **EMG data processing** code for stroke rehabilitation.

Projects

TeamSync Hub | *Python, React Native, AWS Amplify, Node.js*

Spring 2024

- Full stack mobile app where teams can keep track of their team and individual tasks to enhance their project flow.
- Implemented signup/login, calendar, and task tracking features using React Native, AWS Amplify, and Node.js.
- Developed a synchronized Discord bot for real-time user engagement and group interaction.

Embedded Systems - Space Invaders Video Game | *C++, ARM, IR Sensor*

Fall 2022

- Designed, tested, and debugged The Space Invaders video game in C++ with interactive buttons and multiple sprites.
- Created the main menu with player options, difficulty levels, soundtracks, and multiple languages.

Relevant Coursework

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|--------------------------|-------------------------|-----------------------|-------------------------|
| • Software Design I & II | • Algorithms | • Software Design Lab | • Computer Architecture |
| • Data Structure | • Intro to Computing | • Assembly/C | • Embedded Systems |
| • OOP | • Digital Logic/Verilog | • Probability | • Discrete Math |

Technical Skills

Languages: Python, Java, C++, C, Matlab, JavaScript, HTML/CSS

Technologies/Frameworks: React, Linux, GitHub, Azure, JIRA, Protobuf, Spring Boot, SQL, Kafka, Hive, Redis, Flask, Docker