Vien Tran

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY | Atlanta, GA   Expected: May 2026
B.S. in Computer Engineering | Concentration on Software Systems and Computer Hardware

Projects

Cloud Based AI-Platform Chatbot | *JavaScript, React.JS, Amazon AWS*   Summer 2024
- Developed and deployed a full-stack AI chatbot leveraging AWS Bedrock, EC2, and Retrieval-Augmented Generation to deliver intelligent, context-aware responses in real time.
- Integrated the "Crescent Cloud" data system with asynchronous data handling and caching mechanisms, improving response latency by 10% and enhancing user interaction throughput.

Smart Pantry Inventory Management System | *React.js, Node.js, Firebase*   Fall 2024
- Designed and implemented a full-stack inventory management web application to monitor and manage pantry supplies in real time.
- Utilize Firebase for backend data storage, authentication, and cloud functions to track usage logs and automate stock alerts.

Interactive Game System Development | *C, Arduino, Embedded Systems*   Summer 2024
- Engineered a real-time space shooter game on a custom embedded platform, integrating event-driven input handling and dynamic UI elements for enhanced user interactivity.
- Optimized core game loop for performance, reducing execution latency and achieving a 50% improvement in load times through memory-efficient data structure and loop unrolling.

DNA Sequence Search Algorithm | *C++, Algorithm Design, String Matching*   Summer 2024
- Designed and implemented a binary search algorithm to efficiently match encoded DNA subsequences against a sorted genomic database.
- Utilized string preprocessing, binary search trees, and pointer-based optimization to reduce search latency across large scale datasets improving lookup speed over 70%.

EXPERIENCE

Human-in-the-Loop AI/ML Research   January 2025 - Present
Structured Information for Precision Neuroengineering Lab | Atlanta, GA
- Designed and developed the front-end and logic flow for a web-based experimental interface to collect human response data across varied NLP tasks using the Prolific platform.
- Architected experiment workflows and participant pipelines, enabling scalable data collection from over 100 users and improving data labeling efficiency.
- Contributed to iterative testing of active learning strategies aimed at reducing human intervention while maintaining sentiment classification accuracy.

Founder and Embedded Systems Engineer   Summer 2024 - Present
Strike | Create-X Start-Up | Atlanta, GA
- Developed a cross-platform mobile application using Flutter to visualize real-time sensor data from a smart boxing glove.
- Designed interactive screens and visualizations for Android and iOS supporting data tracking and performance summaries.

Data Analyst Intern   October 2023 - December 2023
OMOMI Industries | Atlanta, GA
- Designed and implemented data processing pipelines to automate analysis of real-time transportation operations, improving delivery efficiency and reducing scheduling conflicts.
- Co-developed an internal web-based data management system to digitize operation paperwork, enabling centralized access to financial, logistics, and HR records.

SKILLS

Programming: Verilog, VHDL, C, C++, Java, Python, RISC-V Assembly, MIPS Assembly, JavaScript
Hardware: FPGAs, Oscilloscopes, Logic Analyzers, ARM mbed Microcontroller
Software: Quartus II, NI LabVIEW, GitHub, Android Studio, MS Office, Amazon AWS, React.js