Ali Sao

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Education

University of California, Irvine Irvine, CA
Bachelor of Science in Computer Engineering *June 2027*

Experience

Full-Stack Software Engineering Intern Sep. 2025 – Jan. 2026
Tegori.ai (YC X25) *San Francisco, CA*

- Delivered real-time AI tutoring interactions with sub-**250 ms** first-token latency, measured by client-side performance metrics, by engineering a **token-streaming pipeline** using **Claude (Anthropic)**, **FastAPI**, and **React** with incremental UI rendering.
- Reduced manual lesson creation effort to **zero**, measured by elimination of weekly developer intervention, by designing a reusable **frontend and backend lesson templating system** that automatically generated new AI-driven lessons.
- Expanded platform capability to multimodal learning, measured by feature adoption, by integrating **Desmos** visualizations and **ElevenLabs TTS** while coordinating UI, audio, and streaming state without race conditions.
- Supported a production system serving **100+ active students**, measured by uptime and session integrity, by implementing **PostgreSQL**-backed session tracking and asynchronous backend workflows.

Full-Stack Software Engineering Intern June 2025 – Sep. 2025
Panasonic Avionics Corporation *Irvine, CA*

- Shipped a production maintenance dashboard used by airline customers, measured by deployment to **live aircraft maintenance environments**, by developing a JavaScript/**Node.js** system for certified data exports.
- Reduced fault-report generation time by **40%**, measured via internal benchmarks, by implementing read-through caching, request coalescing, streaming pagination, and async prefetching.
- Improved fault-data retrieval performance by **130%**, measured by end-to-end latency, by optimizing API design and backend aggregation pipelines for large diagnostic datasets.
- Increased reliability of safety-critical workflows by **35%**, measured by post-release defect reduction, by adding **Selenium** end-to-end tests and **Jest** unit coverage across UI-driven export flows.

Undergraduate Researcher Jan. 2024 – Present
Wayne Hayes Lab, University of California, Irvine *Irvine, CA*

- Scaled academic access to bioinformatics tooling to **1,000+ global researchers**, measured by registered users, by transforming a CLI-only neural network aligner into a public **React** and **Node.js** web platform.
- Maintained **99.5% uptime**, measured by production monitoring, by deploying and operating an **Ubuntu + NGINX** environment with SSL, reverse proxying, and caching.
- Improved reliability of long-running graph-alignment workloads, measured by job completion rates, by implementing a **Redis**-backed **BullMQ** asynchronous job system with retries, backoff, and persistence.

Projects

Senior Design Project – High-Frequency Trading Visualization System Sep. 2025 – Present
Project — React, Node.js, Verilog, C *Irvine, CA*

- Built a high-performance **React dashboard** to visualize real-time trading signals and market state, measured by stable rendering under high update rates, by designing reusable visualization components optimized for streaming data.
- Built a low-latency data pipeline connecting **Verilog** and **C** by streaming FPGA-generated market signals over **UART** into a **C-based order book engine**, enabling real-time aggregation and computation of market statistics.
- Developed a **WebSocket-based streaming interface** in **C** to transmit aggregated order book state and trading metrics to a **React UI**, measured by sustained UI responsiveness while processing **millions of computed values**.

Technical Skills

Languages: JavaScript (ES6+), TypeScript, Python, C/C++, SQL, HTML, CSS

Frameworks & Libraries: React, Next.js, Node.js, FastAPI, Express, Tailwind CSS, BullMQ, Firebase

Developer Tools: Git, Docker, Redis, PostgreSQL, NGINX, Google Cloud Platform, VS Code

Technical Focus: Real-Time Systems, Streaming Architectures, Distributed Jobs, API Design, Secure Data Exports