Shawn Cai

San Diego, CA | shawn.jx.cai@gmail.com | +1(657)627-6520

linkedin.com/in/jianxiao-shawn-cai | github.com/ShawnCai223

Education

University of California, San Diego — La Jolla, CA
M.S. in Computer Engineering — Sep 2024 – Expected Mar 2026

Shanghai Normal University — Shanghai, China
B.Eng. in Electronic Information Engineering — Sep 2020 – Jun 2024

Work Experience

ivector — Sacramento, CA
Software Engineering Intern — Jul 2025 – Sep 2025
- Designed and implemented the phone terminal interaction pages in **Unity**, integrating backend logic for user navigation.
- Developed **C#** login functionality with Firebase authentication, enabling secure user sign-in and session management.
- Set up **Firebase** database and authorization rules, ensuring consistent data flow and reducing access errors by 20%.
- Mapped Unity page assets with backend code, improving app responsiveness and cutting loading times by 15%.

Sentari — New York City, NY
Software Engineering Intern — Jun 2025 – Jul 2025
- Developed modular service using cosine similarity and topic matching to track emotional continuity in user transcripts.
- Built a TypeScript parser extracting user intents from 200+ diary entries with over 90% pattern-based **NLP** accuracy.
- Used 768-dim MiniLM embeddings with storage to simulate full NLP pipeline for cold-start and long-term users.
- Implemented clean architecture with utility separation, typed interfaces, and comprehensive pipeline logging.
- Proposed workflow enhancements: clearer task breakdown, structured ownership, and standardized code reviews.

FORVIA HELLA — Shanghai, China
Advanced Engineering Intern — Jan 2024 – May 2024
- Worked on BLDC motor control system development using Model-Based Design (MBD) and embedded integration.
- Built motor control logic in Simulink and auto-generated code for Arduino, reducing **low-level coding** time by 40%.
- Designed and validated motor driver circuits, ensuring firmware-hardware compatibility across control states.
- Developed Simulink models for speed, rotational direction, and fault behavior, targeting real-time deployment.
- Established a reusable **MBD workflow** adopted by the team, improving consistency and reducing test iteration cycles.

Projects

[Fyyur – Artist & Venue Booking Web App](#) – Full Stack Development — Aug 2025 - Sep 2025
- Developed a full-stack web application for managing artists, venues, and shows using **Flask** and **PostgreSQL**.
- Implemented relational database models with **SQLAlchemy**, supporting relationships among artists, shows and venues.
- Integrated Flask-Migrate to manage schema changes with migrations.
- Used **Jinja2** templates to deliver a responsive UI for managing shows and viewing upcoming/past events.

[AI Blog Generator](#) – LLM Integration & Backend Automation — May 2025 - Jun 2025
- Developed full-stack web app for keyword-based AI-generated blog posts tailored to specific topics.
- Integrated **OpenAI GPT-3.5 API** for prompt-engineered, SEO-friendly content generation with dynamic API handling.
- Automated scheduled content creation using Python's schedule library for periodic blog post generation and updates.
- Designed responsive interface with **HTML** templating, delivering real-time feedback and seamless backend integration.

Skills

- **Programming Language:** Python, C/C++, Java, Shell, SQL, Go, Matlab, C#, JavaScript, TypeScript, HTML
- **Framework and Tool:** Git, Linux, Docker, MySQL, PostgreSQL, SQLAlchemy, Flask, REST APIs, Spring Boot, AWS