

# Jianxiao(Shawn) Cai

San Diego, CA | jic154@ucsd.edu | +1(657)627-6520

[linkedin.com/in/jianxiao-shawn-cai](https://linkedin.com/in/jianxiao-shawn-cai) | [github.com/ShawnCai223](https://github.com/ShawnCai223)

## Education

### University of California, San Diego

M.S. in Computer Engineering

La Jolla, CA

Sep 2024 – Expected Mar 2026

### Shanghai Normal University

B.Eng. in Electronic Information Engineering

Shanghai, China

Sep 2020 – Jun 2024

## Work Experience

### ivector

Software Engineering Intern

Sacramento, CA

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

Software Engineering Intern

New York City, NY

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

Advanced Engineering Intern

Shanghai, China

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

### Community Discussion Platform

Jan 2026 - Present

- Developed a **Spring Boot-based** community forum supporting post publishing, commenting, and likes features.
- Designed and implemented REST-style APIs for dynamic client-server interactions and frontend integration.
- Architected the application using **MVC** architecture (Controller–Service–DAO) to improve modularity and maintainability.
- Configured structured logging with level-based output to enhance debugging efficiency and system observability.

### Fyyur – Artist & Venue Booking Web App

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 **Thymeleaf** templates to deliver a responsive UI for managing shows and viewing upcoming/past events.

## Skills

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