Albert Xiangyun Zhang

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EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY
BA, Applied Mathematics & Data Science
May 2026 | Berkeley, CA
Cumulative GPA: 3.80 / 4.0

SINGAPORE AMERICAN SCHOOL
High School
May 2022 | Singapore, SG
Magna Cum Laude

COURSEWORK

Machine Learning
Artificial Intelligence
Data Mining & Analytics
Principles and Techniques of Data Science
Data Structures
Python Programming
Numerical Analysis
Abstract Linear Algebra
Probability

SKILLS

CODING LANGUAGES
Java • JavaScript • Python • SQL • C++ • MATLAB

FRAMEWORKS & LIBRARIES
Spring Boot • MyBatis • Redis • Kafka • React • Vue.js • LangChain4j • PyTorch

TOOLS & PLATFORMS
Git • Docker • Kubernetes • Oracle DB • MySQL • PGVector • Apache Dubbo • Nacos

CONCEPTS
Microservices • Distributed Systems • API Security • RAG • Real-time Collaboration • Vector Search

LANGUAGES
Mandarin • English

SUMMARY

Seeking a Software Engineer position starting May 2026. A resourceful developer with hands-on experience designing and implementing scalable backend systems and full-stack applications. Skilled in **Java**, **Spring Boot**, distributed systems, and cloud-native architecture. Demonstrated success in building microservices, real-time collaboration tools, and secure API platforms with a passion for clean, maintainable code and performance optimization.

EXPERIENCE

SHUJIN DIGITAL FINANCE | Backend Software Engineer Intern
Jun 2025 – Aug 2025 | Qingdao, China
- Led microservice re-architecture by extracting sanctions logic into a dedicated **Spring Boot** service, processing high-volume payment events from **Kafka** and returning risk scores over **gRPC**, improving risk assessment latency by **30%**.
- Developed an admin monitoring console using **Vue** and **Spring Boot** that interfaces with **Oracle DB**, enabling multi-dimensional searches on flagged transactions and reducing compliance report generation time by **95%**.
- Collaborated with a **Go**-based blockchain team to build a Spring Boot adapter that streams payment hashes to a distributed ledger over **gRPC**, ensuring the integrity of over **10,000 daily transactions**.

SERENICHAT AT MORGAN STATE UNIVERSITY | Full-Stack Engineer Intern
May 2024 – Aug 2024 | Baltimore, MD
- Architected a robust multi-turn conversational AI assistant with **Spring Boot 3**, **Spring AI**, and **LangChain4j**, seamlessly integrating multiple LLM APIs and local **Ollama** models, achieving a **90%** successful conversation completion rate.
- Engineered a Retrieval-Augmented Generation (RAG) knowledge base leveraging **PGVector**, implementing token-aware splitting and multi-query expansion to boost context relevance for the LLM by **40%**.
- Built **React**-based autonomous planning workflows with tool-calling features (web search, mapping, PDF generation), enabling the agent to generate detailed, multi-step itineraries in under **30 seconds**.
- Trained and deployed real-time gesture recognition models using **PyTorch**, enabling responsive classification of hand and facial movements with **95% accuracy**.

PROJECTS

INTELLIGENT COLLABORATIVE CLOUD GALLERY
Jun 2024 -- Dec 2024 | Berkeley, CA
- Designed a high-throughput storage pipeline integrating **COS** object storage with MD5-based deduplication and chunked, resumable uploads to handle large files efficiently without blocking compute resources.
- Implemented a multi-level caching strategy combining **Redis** and **Caffeine** with distributed **Redisson** locks, effectively reducing hot-query latency and preventing cache stampedes in production.
- Delivered real-time multi-user collaboration via **WebSocket** sessions, incorporating authentication, "edit-lock" conflict resolution, and **Disruptor**-based lock-free messaging for high throughput.
- Built clean, stable REST APIs using **Spring Boot** and **MyBatis**, incorporating global CORS, unified exception handling, and consistent JSON serialization standards.

API - DISTRIBUTED API MANAGEMENT & INTEGRATION PLATFORM
Jan 2025 -- Apr 2025 | San Francisco, CA
- Architected a microservices backend with **Java**, **Spring Boot**, **Apache Dubbo** (RPC), and **Nacos** service discovery, enabling independent scaling and resilient service interactions.
- Developed a secure API gateway using **Spring Cloud Gateway** to handle dynamic routing, API key/secret authentication, request/response logging, and rate limiting.
- Designed admin workflows for API lifecycle management, enforcing per-user call quotas with **MyBatis-Plus**, backed by **MySQL** and **Redis** caching for efficient persistence.
- Leveraged **React**, **TypeScript**, **UmiJS**, and **Ant Design Pro** to build an intuitive front-end dashboard with analytics powered by **ECharts**.