

ZHENGYU (JASON) SONG

Berkeley, CA

☎ (530)761-2191 ✉ zyusong614@gmail.com 🔗 [linkedin.com/in/zhengyu-song/](https://www.linkedin.com/in/zhengyu-song/)

Education

Georgia Institute of Technology

Jan. 2025 – May. 2026

M.S. in Computer Science

Online

University of California at Berkeley

Jun 2022 – Aug 2024

B.A. in Computer Science, GPA: 3.7/4.0

Berkeley, CA

University of California at Davis (transferred to UC Berkeley)

Sep 2020 – Jun 2022

B.S. in Applied Mathematics, GPA: 3.8/4.0

Davis, CA

Technical Skills

Languages: Java, Golang, Python, C/C++, JavaScript/ES6, SQL

Frameworks: Spring Cloud, Spring Boot, Spring Security, Redis, Apache Kafka, RabbitMQ, Elasticsearch, React.js, Node.js, Angular

Databases: MySQL, PostgreSQL, Oracle DB, Redis, MongoDB

Cloud Services: Amazon EC2, AWS RDS, Amazon S3, Amazon DynamoDB, MongoDB Atlas

Tools: Docker, Git, JUnit 5, JaCoCo, SonarQube, Synk, Swagger OpenAPI, Jenkins, Mockito, Apache JMeter

Work Experience

icjsq.com Inc.

May 2023 – Aug. 2023

Software Engineer Intern - Backend

Beijing, China

- Applied **Spring Boot** to build backend services for IOS, Android, Web, and sub-program on WeChat for e-commerce platforms.
- Applied **Spring Aspect Oriented Programming (AOP)** to address cross-cutting concerns, such as logging and exception handling.
- implemented a **MySQL** database to manage loyalty services and complemented by integrating **Redis** using the **cache-aside** pattern, achieving a 60% improvement in data access efficiency.
- Developed **Swagger/OpenAPI** to meticulously document **RESTful APIs** and directly test from documentation.
- Utilized the **Test-Driven Development (TDD)** methodology for web services, employing **JUnit 5** and the **Mockito** API for dependency mocking. Additionally, employed **JaCoCo** to ensure a minimum of 80% test coverage.
- Designed, deployed, updated features, i.e. **Google Map APIs** and designed details to acquire access to users' devices and differentiated design of merchant and customer systems.

Projects

Resident Engagement System

- Utilized **Java**, **SpringCloud**, **SpringBoot** to develop a resident enegagement system in **microservice** design pattern.
- Implemented **Java concurrency API**, including **ForkJoinPool**, to enhance high-load task processing efficiency by 70%.
- Developed **Role-Based Access Control (RBAC)** with **Spring Security** for streamlined authority verification.
- Completed development of **Grafana** dashboards with **Prometheus**, providing a centralized platform for monitoring and analyzing performance metrics.
- Enhanced system resilience by integrating **Eureka** with **self-preservation mode** for robust service discovery, ensuring sustained functionality during network partitions and temporary failures.
- Implemented **Apache Kafka** with **idempotency** to facilitate reliable message streaming for event-driven architectures, enhancing data throughput by 65% and better integration across microservices in enterprise-level applications.

E-Commerce Shop

- Developed an E-Commerce Shop application by utilizing **Node.js**, **Express.js** for backend, **React.js** for frontend and **MongoDB** as database, integrated with **PayPal API**.
- Managing global state with **Redux (Actions/Reducers)**, using state in components **useDispatch/useSelector**.
- Developed custom authentication middleware and error handling framework, streamlining authentication processes and improving error management.
- Implemented secure user authentication by utilizing **JWT** (JSON Web Tokens) in conjunction with **HTTP-Only cookies**, enhancing security and minimizing vulnerability to **cross-site scripting (XSS) attacks**.
- Leveraged **RxJS observables** for managing **asynchronous** operations, facilitating efficient handling of data streams and events.