

Leo Zhu

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Summary

Accomplished Senior Software Engineer with commercial experience in developing distributed systems, complex web applications and scalable APIs using Java and modern backend frameworks. Skilled in microservices, event-driven systems, and cloud-native applications with hands-on AWS experience. Strong foundation in computer science fundamentals, including concurrency, multithreading, design patterns, data structures and solution design.

Leads by example in Agile environments, fostering collaboration, driving technical excellence, and cultivating an inclusive culture through hands-on contribution and mentorship.

Skills

- **End-to-End Solution Delivery:** Proven ability to drive projects from ideation and design iteration to development and production deployment, ensuring scalable, reliable, and maintainable systems.
- **Programming:** Java (8, 11, 17), Spring Boot, Spring Cloud, Spring Core, Spring MVC, Hibernate, MyBatis, TypeScript, Basic knowledge of Kotlin and Groovy
- **Architectural and System Design:** Microservices, Event-Driven Systems, Domain-Driven Design (DDD), Resilient System Design (Load Balancing, Throttling, Back Pressure, Circuit Breaking, Rate Limiting, Graceful Degradation)
- **Authentication & Authorization:** OAuth2, OIDC, JWT, Identity Provider (IdP) development, Role-Based Access Control (RBAC), API security
- **Database:** MySQL, MSSQL, Redis; Proficient in JPA and ORM frameworks
- **Messaging Systems:** Apache Kafka, RabbitMQ
- **API Design:** REST APIs, GraphQL, SOAP
- **Containerization and Orchestration:** Docker, Kubernetes, Terraform
- **Testing and Development:** TDD, JUnit, Mockito, Cucumber, Spock
- **Build Tools and CI/CD:** Gradle, Maven, Jenkins, GitHub Actions
- **Cloud and DevOps:** AWS, Azure; Logging and monitoring tools
- **Version Control:** Git, GitHub
- **Methodologies:** Agile, Scrum

Employment History

Sportsbet - Senior Software Engineer

September 2023 – Present

- Led the migration of multiple services and shared components from Spring Boot 2 to Spring Boot 3, ensuring compatibility with Java 17 and improving maintainability across the system.
- Developed and maintained NRL and AFL betting systems, generating dynamic odds and selections for real-time betting operations.
- Conducted performance debugging and benchmarking to enhance system responsiveness and scalability.
- Designed event-driven microservices using Kafka and Spring Boot, incorporating DDD and TDD principles to enhance scalability, reliability, and maintainability.
- Collaborated with cross-functional teams to troubleshoot and resolve production issues, ensuring minimal downtime and 99.99% system uptime during peak events.
- Actively participated in code reviews to maintain coding standards and guide junior and mid-level engineers.

Procter & Gamble - Application Architect

July 2020 – March 2023

- Led the architecture and end-to-end development of CRM-related public-facing microservices, driving solutions from ideation to design iteration and feature delivery. Ensured scalability, security, and maintainability to support millions of consumer interactions.
- Redesigned and optimised Account microservices by applying TDD, DDD, and database sharding, evolving the system through iterative design improvements. Delivered a highly scalable architecture supporting 100M+ members and handling 1600+ QPS at peak load.
- Optimised Loyalty microservices, enabling flexible configuration of loyalty rules, enhancing user engagement and system reliability.
- Designed and developed Guardian, an OAuth-based identity provider, implementing authentication and authorization flows with JWT to secure customer data and ensure compliance with privacy standards.
- Designed and developed a connector microservice to facilitate integration with multiple e-commerce platforms, supporting over 5 million daily orders.
- Contributed to the development of a consumer data platform, enabling targeted marketing strategies via channels like SMS and AI calls.
- Provided architectural guidance and established best practices for the development team through mentoring, code reviews, and governance activities such as audits and compliance assessments.
- Collaborated with cross-functional teams and business stakeholders to align technical proposals with strategic objectives, ensuring smooth platform upgrades and efficient delivery.
- Implemented Agile practices, including sprint planning, retrospectives, and incremental delivery, to enhance team collaboration and align technical goals with business priorities.

Midea Group - Senior Software Engineer

March 2019 - July 2020

- Designed, developed, and deployed new features for Midea's International Channel Collaboration System, collaborating closely with leads and product managers to deliver feature enhancements experiments for global users. Engaged in hands-on software development, ensuring solutions met scalability, reliability, and security requirements.

- Utilised microservices architecture to decompose the existing monolithic application into smaller, manageable services, improving system modularity and maintainability.
- Streamlined development and deployment processes by adopting DevOps practices and tools such as Git, JIRA, Jenkins, and Sonar.
- Enhanced core API performance, reducing response time from 1 second to 30 milliseconds through the introduction of Redis caching.
- Increased system robustness and fault tolerance by implementing Kafka message queues to decouple dependencies during peak loads or failures.
- Conducted regular code reviews and implemented quality assurance measures to maintain code integrity and improve software quality.

Hawkeye Data - Software Engineer

December 2016 - December 2017

- Contributed to the foundational system design of Hawkeye Data Engine (HDE), a multi-tenant SaaS platform for big data analytics and played a pivotal role in its development.
- Delivered project, report, and task management services using microservices architecture and Spring Cloud ecosystem.
- Built a Spark module to address HDE's big data processing needs, optimizing data analytics capabilities.
- Improved modular software components and enhanced system efficiency by collaborating with cross-functional teams.
- Maintained high standards of quality through best practices in code reviews, comprehensive testing, and clear documentation.

HSBC - Software Engineer

March 2015 - December 2016

- Enhanced and maintained the RAVEN (HSBC Counterparty Credit Risk Core System), ensuring its reliability and functionality.
- Improved code maintainability and readability through refactoring, leveraging Sonar hints to resolve code quality issues.
- Collaborated with third-party suppliers to upgrade the platform, enhance the price calculation module, and ensure seamless updates to system interfaces.
- Enhanced support for multi-exchange rate calculations, enabling the system to handle complex pricing scenarios effectively.
- Ensured system robustness and accuracy through thorough unit tests, integration tests, and user acceptance tests.

Education

- **Feb 2013 - Dec 2014:** Master of Applied IT, Monash University
- **Sep 2008 - Jun 2012:** Bachelor of E-commerce, Guangdong University of Finance & Economics

Others

- Start-up experience
- Fluent English, Mandarin, Cantonese
- TOGAF 9 certified