­Jimmy Hao

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PROFESSIONAL SUMMARY

* 9+ years of experience in designing, developing, and deploying scalable, high-performance backend applications using Core Java, J2EE, and Spring ecosystem.
* Strong expertise in Core Java concepts including collections, multithreading, exception handling, generics, streams, and functional programming (Java 8/11/17).
* Experienced in designing high-throughput, low-latency backend systems using asynchronous messaging (Kafka), in-memory caching (Redis), and Java concurrency constructs such as ThreadPoolExecutor, CompletableFuture, and ReentrantLock.
* Skilled in developing enterprise applications using Spring Boot, Spring MVC, Spring Security, Spring Data JPA, and Hibernate ORM.
* Hands-on experience designing and consuming RESTful APIs using Spring MVC and OpenAPI (Swagger) specifications.
* Proficient in database modeling and optimization using Oracle, MySQL, and PostgreSQL and IBM DB2; experienced with stored procedures, PL/SQL, query optimization, and data migration between RDBMS.
* Developed scalable Microservices with Spring Boot, integrated service registry (Eureka) and API Gateway (Spring Cloud Gateway).
* Implemented asynchronous communication between microservices using Apache Kafka and RabbitMQ.
* Solid understanding of containerization; developed Dockerfiles for Java applications and orchestrated deployments using Kubernetes.
* Experienced in deploying microservices to AWS (EC2, S3, RDS, CloudWatch, IAM), with knowledge of cloud-native design patterns.
* Practical experience integrating Redis caching layer and optimizing database access for high-throughput systems.
* Hands-on expertise building CI/CD pipelines using Jenkins, Maven, Git, Docker, and artifact repositories like Nexus.
* Proficient in unit, integration, and API testing using JUnit 5, Mockito, and REST Assured frameworks.
* Implemented security layers with Spring Security, JWT, OAuth2, and basic LDAP/SSO integrations.
* Familiar with ELK Stack (Elasticsearch, Logstash, Kibana) and Prometheus/Grafana for monitoring and centralized logging.
* Strong knowledge of J2EE design patterns such as MVC, DAO, Singleton, Factory, Business Delegate, and Service Locator.
* Worked with SOAP web services using JAX-WS and integrated external systems with XML and WSDL-based APIs.
* Experienced with Agile/Scrum methodologies, participating actively in sprint planning, daily stand-ups, and retrospectives.
* Skilled in documenting technical design, API contracts, and maintaining Confluence pages for internal knowledge base.
* Effective at collaborating with cross-functional teams including QA, DevOps, and Product Managers to deliver high-quality software solutions.
* Strong debugging, profiling, and troubleshooting skills using VisualVM, JConsole, and log analysis.
* Committed to clean code practices, modular design, reusable components, and high maintainability.
* Adept at version control and branching strategies using Git (GitFlow, PR reviews) and SVN.
* Mentored junior developers through code reviews, training sessions, and best practice enforcement.
* Quick learner and passionate about adopting emerging technologies and tools to improve team productivity.

SKILLS

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| Languages | Java 8/11/17(concurrency: ExecutorService, CompletableFuture, ReentrantLock), SQL, PL/SQL, Shell Scripting |
| Frameworks | Spring Boot, Spring MVC, Spring Security, Spring Data JPA, Hibernate, Struts |
| Web Services | REST APIs, JAX-WS (SOAP) |
| Microservices | Spring Cloud (Eureka, Config Server, Gateway), Kafka, RabbitMQ, Redis |
| Databases | Oracle, MySQL, PostgreSQL, IBM DB2 |
| Build Tools | Maven, Gradle |
| Version Control | Git, SVN |
| Testing | JUnit 5, Mockito, REST Assured |
| Containerization | Docker, Kubernetes (basic usage) |
| Cloud Platforms | AWS (EC2, S3, RDS, IAM, CloudWatch) |
| Monitoring & Logging | ELK Stack, Prometheus, Grafana, Log4j, Logback |
| Application Servers | Apache Tomcat, JBoss EAP, WebLogic |
| Front-end Technologies | JSP, HTML5, CSS3, JavaScript, JQuery |
| Tools | IntelliJ IDEA, Eclipse, Postman, Confluence |
| Methodologies | Agile (Scrum), SDLC, TDD |
| Design Patterns | MVC, DAO, Singleton, Factory, Service Locator, Business Delegate |
| Concurrency & Messaging | ThreadPoolExecutor, AtomicInteger, ConcurrentHashMap, CompletableFuture, Kafka (high-throughput event streaming), Redis (low-latency caching) |

PROFESSIONAL EXPERIENCE

**Java Developer**

**UHG - Chicago, IL**

**Sep 2024 – Present**

**Responsibilities**

* Refactored legacy Struts modules to Spring MVC with JSP, achieving clear separation of controllers and views via annotation-driven configuration.
* Configured and implemented servlet filters and listeners to support security intercepts, CORS handling, and application initialization logic.
* Leveraged Hibernate/JPA annotations (@Entity, @Table, @NamedQuery) for Oracle 10g persistence, optimizing batch insert and update operations.
* Developed SOAP services using JAX-WS and Spring-WS to integrate reliably with the Social Security Administration (SSA) systems.
* Exposed Spring Boot Actuator endpoints and custom health checks to ensure service reliability and observability.
* Designed responsive UI screens combining JSP, Bootstrap, jQuery UI, DataTables, and AJAX for enhanced user experience.
* Applied enterprise design patterns (MVC, DAO, Session Facade, Business Delegate, Factory, Singleton) to maintain system scalability and maintainability.
* Authored and managed Oracle stored procedures, views, and sequences to support complex transaction and batch-processing workflows.
* Migrated JMS-based HL7 messaging to Spring JMS with ActiveMQ (or Kafka) for asynchronous, reliable message exchange.
* Enforced robust validation: custom JavaScript client-side checks alongside Spring Validator and Hibernate Validator annotations on the server.
* Centralized structured logging with SLF4J + Logback, shipping logs to an ELK Stack for analysis and alerting.
* Crafted unit and integration tests using JUnit 5, Mockito, and Spring Boot Test to ensure high coverage for service and DAO layers.
* Adopted Git with GitFlow branching, pull requests, and code reviews, replacing older SVN workflows.
* Organized the build as a multi-module Maven project for efficient dependency management and faster packaging.
* Created Dockerfiles to containerize applications and deployed multi-container setups via Kubernetes, using liveness/readiness probes.
* Deployed WARs on Tomcat in AWS EC2, leveraging S3 for static assets, RDS for managed databases, and CloudWatch for monitoring.
* Automated API documentation using Swagger/OpenAPI, streamlining integration with frontend teams and external partners.
* Participated end-to-end in Agile/Scrum ceremonies: backlog refinement, sprint planning, daily stand-ups, and retrospectives.
* Documented technical designs, API contracts, and deployment processes in Confluence for team knowledge sharing.

**Environment:** Java 11, Spring Boot/MVC/Security, Hibernate/JPA, Oracle 10g, JSP, Bootstrap, jQuery, AJAX, Maven, Git/GitFlow, JUnit 5, Mockito, Docker, Kubernetes, AWS (EC2, S3, RDS, CloudWatch), Swagger/OpenAPI, ELK Stack, Spring JMS/Kafka.

**Java Developer**

**M&T Bank - Buffalo, NY**

**Jun 2023 – Aug 2024**

**Responsibilities**

* Architected and delivered Spring Boot microservices for customer notifications, authentication, and reporting.
* Defined and implemented RESTful APIs adhering to HTTP best practices for seamless service-to-service integration.
* Enabled dynamic configuration with Spring Cloud Config (Git-backed) and service discovery via Eureka.
* Streamlined inter-service communication using Feign clients with Resilience4j for circuit breaking and retries.
* Secured endpoints with Spring Security and JWT-based, role-based access control for stateless authentication.
* Reduced database load by integrating Redis as a distributed cache for high-traffic data.
* Built event-driven pipelines with Apache Kafka producers/consumers for asynchronous workflows.
* Modeled data in PostgreSQL and MongoDB repositories using Spring Data for structured and semi-structured storage.
* Verified API contracts and edge-cases using REST Assured and JUnit 5 integration tests.
* Automated the build–test–deploy lifecycle with Jenkins pipelines, Docker, and Maven.
* Containerized services with Docker and orchestrated multi-container deployments via docker-compose in QA.
* Exposed health and metrics endpoints with Spring Boot Actuator for proactive monitoring.
* Centralized application logs in structured JSON via Logback for downstream aggregation.
* Collaborated in Agile ceremonies—backlog grooming, sprint planning, and retrospectives—to refine estimates and improve stability.
* Produced and maintained Swagger/OpenAPI specifications for all public APIs, enabling clear frontend/back-end contracts.
* Standardized data transfer with shared DTO libraries and utility modules across services.
* Managed API versioning to maintain backward compatibility during iterative releases.
* Monitored post-release performance using logs and metrics; diagnosed and remediated production issues.
* Drove continuous improvement by identifying startup-time optimizations and enhancing error-handling strategies.
* Built event-driven microservices using Kafka to process thousands of events per second, ensuring low-latency delivery and fault-tolerant consumer design.
* Implemented non-blocking workflows using ThreadPoolExecutor and CompletableFuture to support high-throughput event processing.
* Tuned Kafka consumer configurations, batching, and backpressure handling to optimize performance under burst load.
* Applied Redis caching for high-frequency data retrieval, reducing DB load and improving end-to-end latency.

**Environment:** Java 11, Spring Boot, Spring Cloud (Eureka, Config Server), REST APIs, Kafka, Redis, PostgreSQL, MongoDB, Docker, Jenkins, Maven, Git, JUnit 5, Logback, Java Concurrency (ExecutorService, ReentrantLock, CompletableFuture, ConcurrentHashMap), Kafka, Redis.

**Java Developer**

**MetLife Insurance – New York, NY**

**Oct 2022 – May 2023**

**Responsibilities**

* Developed multiple Spring Boot micro-modules integrated into an enterprise insurance platform.
* Refactored legacy JSP-based modules into Spring MVC + Thymeleaf views, improving performance and maintainability.
* Developed and consumed RESTful APIs to support policy lookup, claims processing, and document uploads.
* Applied Spring Security for securing API endpoints, role-based access control, and login session handling.
* Managed data persistence using JPA and Hibernate, with complex entity mapping and cascading relationships.
* Tuned SQL queries and indexes in Oracle DB to reduce execution time on high-volume transactional operations.
* Created custom exception handlers and global response wrappers using @ControllerAdvice.
* Automated unit testing with JUnit 5 and integration testing using Spring Boot Test.
* Integrated Jackson for JSON processing and validation of API input/output payloads.
* Used Maven for dependency management, including multi-module build configurations.
* Maintained logging, diagnostics, and environment-aware configs using Logback and application.properties profiles.
* Participated in daily stand-ups, sprint planning, and refinement meetings as part of a Scrum team.
* Assisted in environment deployment scripts and tested war files on Apache Tomcat before release.
* Provided production support, monitored logs, and analyzed stack traces to identify and resolve issues.
* Reviewed junior developers’ code and provided feedback on design, structure, and exception handling practices.
* Wrote technical documentation for services, endpoints, and database model diagrams.
* Collaborated with QA to define test data and simulate edge cases for critical business flows.
* Worked with product managers to break down requirements into developer-friendly tasks with clear acceptance criteria.
* Managed Git branches, reviewed PRs, and performed conflict resolution during feature merges.

**Environment:** Java 7, Spring Boot, Spring MVC, Spring Security, Hibernate, JPA, Oracle DB, JSP, Thymeleaf, REST API, Maven, Git, JUnit 5, Tomcat, IntelliJ IDEA, Scrum

**Java Developer**

**Bank of America - New York, NY**

**Oct 2021 – Sep 2022**

**Responsibilities**

* Designed and implemented J2EE-based web applications using Servlets, JSP, JSTL, and MVC architecture.
* Developed RESTful services using Spring MVC and Spring Boot for various modules including user management, authentication, and reports.
* Applied Spring Core concepts like dependency injection and component scanning to wire service and DAO layers.
* Implemented backend logic and business rules in Spring Service classes and integrated them with Hibernate-based DAO components.
* Created entity relationships using JPA annotations and managed complex joins, lazy loading, and cascading.
* Developed SQL queries, stored procedures, and views in Oracle, MySQL, and DB2 to support data-heavy business modules and reporting functions across different environments.
* Utilized JDBC templates for custom queries and integrated them with transactional services.
* Built and managed project dependencies using Maven and applied proper profiles for different environments.
* Used Git for version control and worked with feature branches and pull requests under team guidelines.
* Wrote JUnit test cases and used Mockito for mocking service-layer dependencies to ensure test coverage.
* Logged errors and system activities using Log4j with externalized logging configurations.
* Integrated UI using JSP, HTML, CSS, and basic JavaScript for form inputs and table displays.
* Participated in Agile ceremonies including sprint planning, daily stand-ups, and retrospectives.
* Collaborated closely with QA and business analysts to clarify requirements and test scenarios.
* Supported deployment to Apache Tomcat and JBoss servers across multiple test and staging environments.
* Involved in defect analysis, hotfix delivery, and post-release support for internal users.
* Maintained clean and modular code following layered architecture and standard naming conventions.
* Documented application workflows, API contracts, and environment configurations using Confluence.
* Reviewed peer code and participated in technical discussions to ensure alignment on solution design.
* Designed and implemented a custom LRU cache using HashMap and Doubly Linked List for fast, memory-efficient access patterns, protected by ReentrantLock for thread safety.
* Used ConcurrentHashMap and AtomicInteger to manage concurrent access to user session and reporting modules.
* Refactored service layer to reduce synchronization bottlenecks and enable multi-threaded request handling with minimal contention.

**Environment:** Java 8, J2EE, Spring MVC, Spring Boot, Hibernate, JPA, Oracle, MySQL, DB2, JSP, Servlets, JDBC, HTML, JavaScript, Maven, Git, JUnit, Log4j, Tomcat, JBoss, IntelliJ IDEA, Confluence, Agile/Scrum, Java Concurrency (ExecutorService, ReentrantLock, CompletableFuture, ConcurrentHashMap), Kafka, Redis

**Java Developer**

**Chengdu Different Consulting - China**

**Jan 2017 – May 2021**

**Responsibilities**

* Participated in the development of backend services using Spring Boot and Java 11, under the guidance of senior developers.
* Assisted in building and testing REST APIs to support internal web applications.
* Collaborated in Agile teams, attended daily standups, sprint planning, and retrospectives.
* Helped configure application properties and environment profiles for local and staging deployments.
* Contributed to database interaction logic using Spring Data JPA and wrote SQL queries for PostgreSQL.
* Supported basic microservices development and integration efforts using Spring Cloud components.
* Wrote unit tests using JUnit and Mockito for verifying service logic and controller behavior.
* Participated in peer code reviews and learned Git branching strategies.
* Created Postman collections for testing REST endpoints and assisted QA team during integration testing.
* Fixed UI bugs in JSP pages and contributed to improving user experience in simple web pages.
* Practiced logging and debugging using SLF4J and Logback.
* Helped document APIs and deployment steps on Confluence for team reference.
* Actively engaged in mentorship sessions, team demos, and project retrospectives.
* Demonstrated strong willingness to learn new technologies and contributed to sprint goals consistently.

EDUCATION

Master of Science in Computer Engineering from Syracuse University

Bachelor of Engineering in Communication Engineering from UESTC(China)