Milad Sadeghi

Java Backend Developer

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Summary

Result-Driven Java Backend Engineer with expertise in designing and implementing scalable, resilient microservices architectures. Proficient in enhancing system reliability and performance through robust API management, distributed caching, and real-time event-driven solutions. A collaborative team player dedicated to optimizing development workflows, fostering knowledge sharing, and mentoring peers. Consistently delivers high-impact solutions that improve scalability, security, and operational efficiency.

Skills

Main: Java Spring Boot Spring Data(JPA-Redis) Spring AOP Spring Security OracleDB Apache Kafka Debezium

Other: Multi-Threading JWT OAuth2 Lombok Code Review Git Linux Algorithms Data Structures MySQL Bucket4J Spring Cloud RabbitMQ Swagger SpringDoc OpenFeign Jakarta Validation Resilience4J

Deploy: Gitlab CI Docker Docker-Compose Maven Google Jib BuildPacks Paketo WebHooks

Test: JUnit Mockito Postman

Soft: Mentorship Communication Collaboration Team Work

Work Experience

Java Backend Developer

BehPardaz Jahan Co. *Oct 2024 - Present*

- Designed and implemented a **scalable API rate limiting** solution using **Bucket4J** and **Redis** to protect backend services from **abuse** and ensure fair usage. This implementation **reduced API overload** and maintained **system stability** during traffic spikes, improving service overall reliability.
- Designed a standardized **error handling system** by implementing a **custom error response** class, **custom authentication entry point** and a **global exception handler** in spring boot backend to ensure consistent and **detailed error propagation** to an angular frontend. This solution improved frontend error resolution, **reduced debugging time** and **enhanced security** by providing **structured error messages**.
- Designed and implemented a **unique error code validation mechanism** to enforce the **use of distinct error codes** acorss the backend, ensuring **consistency in API error responses**. This system improved **frontend error handling accuracy**, reduced debugging time and **prevented duplicate error code conflicts** in production.
- Implemented **real-time configuration updates** by integrating **Apache Kafka** and **Debezium** to **monitor database changes** in a configuration table, **automatically synchronizing updates** across the backend. This solution **eliminated manual restarts**, **reduced configuration drifts** and **improved system reliability** by ensuring instant propagation of critical changes.
- Optimized **Redis cache management** by leveraging **java virtual threads**, **Callable** for async execution, **spring data jpa** for database interactions and **RedisTemplate** to dynamically update time-to-live duration. This solution **improved cache efficiency** by reducing stale data, **enhanced scalability through non-blocking operations** and **cut latency by 30%** in high-throughput scenarios.
- Modernized **authentication** by transitioning from a **stateful MVC** architecture to a **stateless JWT-based** system, enabling seamless **decoupling** of the angular frontend from the spring boot backend. This redesign **improved scalability**, **simplified session management** and enhanced security while ensuring smoother integration and **faster performance** for the frontend.
- Identified and **optimized inefficient methods** by applying **advanced algorithms and data structure** design techniques, resulting in a **20%** overall **performance boost**. This enhancement **reduced processing times**, **improved resource utilization** and **elevated the system's responsiveness** under high-load conditions.

- Designed and implemented a **unified exception handling system** to seamlessly manage both **built-in** and **custom business exceptions**, improving **error clarity** and **maintainability**. This scalable solution **reduced debugging time** and **enhanced system reliability** through consistent and **actionable error responses** across the application.
- Conducted weekly **data structures and algorithms training sessions** to **enhance the team's problem solving skills** and **algorithmic thinking**. This initiative improved **code efficiency**, **optimized performance-critical components** and fostered a culture of continuous learning and technical excellence.
- **Translated** and published English technical tutorials to Persian, making cutting-edge software engineering knowledge more accessible to **non-native speakers**. This initiative **accelerated the learning curve** for fellow engineers, **improved team competency** and fostered knowledge sharing in the local team community.
- **Resolved undocumented project components** by collaborating with test and analysis teams to produce accurate **technical documentation**, eliminating knowledge gaps. This effort **improved maintainability**, reduced onboarding time for new developers and minimized risks for unclear system behavior.
- Partnered with the infrastructure team to design and implement robust **GitLab CI/CD pipelines,** automating build, test and deployment process. This collaboration **reduced manual errors**, accelerated release cycle by 40% and ensured **consistent delivery** quality across projects.
- Onboarded new team members by **clearly explaining project architecture** and **simplifying complex technical concepts**, enabling faster ramp-up times. This approach reduced their learning curve, **improved early productivity** and **strengthened team cohesion** through effective knowledge transfer.
- Conducted systematic **code reviews** for team members via **GitLab** to ensure adherence to coding standards, **identify potential bugs**, and share best practices. This process improved **code quality**, reduced post-deployment defects, and fostered a collaborative culture of continuous learning.
- Optimized deployment efficiency by creating a **multi-stage Dockerfile** for a multi-module Spring Boot project, significantly **reducing the final image size by 45%**. This implementation accelerated container startup time, **enhanced security** by minimizing the attack surface, and streamlined the **CI/CD pipeline** for faster builds.

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June 2022 - Oct 2024

Freelance

- Fortified microservices resilience by implementing **Circuit Breaker**, **Fallback**, **Timeout**, and **Retry** mechanisms in **Spring Cloud Gateway**, **preventing cascading failures** during downstream service outages. This architecture improved **system availability**, gracefully degraded functionality under load, and **enhanced user experience** with responsive fallback responses.
- Established a robust **service discovery** framework using **Eureka Server** and **Spring Cloud OpenFeign** to enable dynamic service registration and load-balanced communication between microservices. This architecture **improved system resilience**, **reduced hard-coded endpoint dependencies**, and **cut inter-service latency** through intelligent request distribution.
- Centralized and secured **microservice configurations** by implementing a dynamic externalization system using **Spring Cloud Config**, **RabbitMQ**, and **webhooks** with **full encryption**. This automated approach **eliminated manual configuration errors**, **reduced deployment failures**, and **enhanced security** through encrypted sensitive data management.
- **Orchestrated microservices deployment** by developing a comprehensive **Docker Compose** file with custom network configurations and service dependencies for both development and production environments. This solution **standardized the deployment process**, reduced environment-specific issues, and enabled seamless local development and production parity.
- Streamlined containerization for microservices by integrating **Google Jib** to build optimized, production-grade Docker images without **Dockerfiles**. This approach improved build **performance**, **enhanced security** through distroless base images, and ensured consistent, **reproducible deployments** across environments.
- Enhanced **API documentation** by leveraging **Springdoc** annotations to explicitly define **all possible HTTP response** codes and schemas in **Swagger UI**, providing the frontend team with **clear and reliable integration specs**. This improvement **reduced miscommunication** , accelerated frontend development, and **minimized integration errors**.
- **Enhanced API robustness** by implementing comprehensive **input validation** for DTO classes using **Jakarta Validation** constraints, **preventing malformed data** from propagating into the business layer. This initiative **reduced data-related bugs** and **improved system security** by enforcing strict data integrity rules at the entry point.

Volunteer Experience

Open Source Developer
Jan 2018 - Sep 2019

- Implemented linear discriminant analysis algorithm from scratch
- Converted generator object to a list object
- Implemented khatri-rao matrix product algorithm
- Refactored all .py files in nasa mars helicopter flight program
- Implemented neural network of optimized u-net for brain tumor segmentation paper

Algorithms & Data Structures Instructor
Feb 2024 - Sep 2024

- Explaining and solving JavaScript algorithmic challenges on DevAcademy frontend community meetings(+2.4K developers) every week

Software Programming Instructor
Oct 2023 - Jun 2024

- Taught and mentored 5 junior/mid-level frontend developers on the TypeScript language through a private Discord server.

Content Creator
Jan 2019 - Present

- Wrote and published technical blog posts about Java, JavaScript, React, TypeScript, Data Structures and Algorithms on three platforms: Medium, HashNode and Virgool.

Certificates

Docker Basics
Oct 2022

- Docker Basics Online Course - Issued By MaktabKhooneh - Score: 95 out of 100

Awards

Hacktoberfest
Oct 2019

Contribution on open source projects - Issued by Intel, GitHub

Hacktoberfest
Oct 2020

Contribution on open source projects - Issued by Intel, GitHub

Hacktoberfest
Oct 2021

Contribution on open source projects - Issued by Intel, GitHub

Hacktoberfest
Oct 2023

Contribution on open source projects - Issued by Digital Ocean, Appwire