

José André Pereira

Backend Software Engineer

José André Martins Pereira

Backend Software Engineer, Java, Microservices, Distributed Systems
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Professional Summary

Backend Software Engineer with 5 years of experience designing and developing Java-based microservices and distributed systems using Spring Boot. Experienced in scalable backend architectures, REST APIs, event-driven systems, PostgreSQL, Kafka, Docker and Kubernetes. Passionate about software craftsmanship, distributed systems, architecture patterns and building maintainable, high-quality software.

Enjoy exchanging ideas and sharing knowledge with fellow engineers, and value working in environments where technical discussion and collaboration are part of the culture.

Skills

Languages & Frameworks

- Java, Spring Boot, Spring Data JPA, Spring Security, Hibernate, MapStruct, OpenFeign, OpenAPI Generator, Liquibase

Microservices & Architecture

- Microservices, Distributed Systems, REST APIs, Hexagonal Architecture, Clean Architecture, SOLID, Design Patterns, OpenAPI (Swagger), Agile (Scrum)

Data & Messaging

- PostgreSQL, MongoDB, MySQL, SQL Server, Kafka, RabbitMQ, Redis

DevOps & Cloud

- Docker, Kubernetes, AWS (Cloud Practitioner), Datadog, Linux

Testing & Tools

- JUnit, Mockito, Git

Security

- Spring Security, JWT Authentication

AI & Emerging Technologies

- LLM Integration, AI-assisted development

Experience

KCS IT / Backend Software Engineer

APR 2026 - PRESENT, PORTO, PORTUGAL

Financial/Accountability Sector Project

- Contributing to the development and maintenance of backend services for a financial management and accounting platform.
- Working with Java, Spring Boot, microservices architecture, and PostgreSQL within a distributed system.
- Working with Apache Solr for search and indexing, and Redis for caching strategies.
- Collaborating in an Agile Scrum team with continuous delivery practices.

Celfocus / Backend Software Engineer

JUL 2024 - APR 2026, PORTO, PORTUGAL

Telecommunications Sector Project

- Contributing to a large-scale telecommunications platform aligned with TM Forum standards.
- Implementing scalable Java 11/17 microservices using Spring Boot within a distributed architecture supporting enterprise telecommunications operations, leveraging PostgreSQL and MongoDB for data persistence.
- Collaborating in a distributed Agile team of 50+ members.

Financial Sector Project

- Co-designed and implemented a document management microservice using Java 17, Spring Boot, and PostgreSQL.
- Contributed to architectural decisions alongside Solution Architect and Tech Lead.
- Applied microservices best practices to ensure scalability and maintainability.
- Worked in an Agile Scrum team (~12 members) with continuous delivery practices.

ITSector / Backend Software Engineer

AUG 2023 - JUN 2024, PORTO, PORTUGAL

Financial Sector Project

- Contributed to the modernization of financial systems through the development of Java-based microservices supporting digital transformation initiatives.
- Managed database schema versioning using Liquibase and Microsoft SQL Server.
- Containerized services using Docker.

Devoteam / Backend Software Engineer

APR 2022 - JUN 2023, PORTO, PORTUGAL

Retail Sector Project

- Designed and developed microservices for a retail e-commerce platform.
- Built REST APIs using Java, Spring Boot, PostgreSQL and MongoDB.
- Integrated Kafka for asynchronous communication.

CGI / Trainee Backend Software Engineer

MAR 2021 - DEC 2021, PORTO, PORTUGAL

Utilities Sector Project

- Developed backend components using Java and Spring MVC.
- Managed PostgreSQL database interactions.
- Built Robotic Process Automation (RPA) solutions and reporting templates.

Personal Projects

Microservices Architecture Case Study in E-commerce (Master's Dissertation)

OCT 2020 - JUN 2023

- Designed and implemented a microservices-based architecture applying microservices patterns such as Saga and CQRS, addressing data consistency and distributed system challenges.
- Applied architectural principles including hexagonal architecture, asynchronous messaging and service decomposition, focusing on scalability and system modularity.
- Conducted functional and load testing (JMeter) to evaluate performance, scalability, and the impact of architectural decisions on system availability.
- Deployed the system to Google Cloud Platform (GCP), provisioning and configuring Compute Engine instances to perform distributed load testing under realistic conditions.
- Dissertation document: <https://hdl.handle.net/1822/85581>
- Repository: <https://github.com/josepereira1/dissertation>

Personal Finance Tracking App

MAY 2022 - PRESENT

- Full-stack personal finance tracking application using Java 17, Spring Boot, PostgreSQL, Docker, Vue.js, self-hosted on a Raspberry Pi.
- Multi-user financial tracking with advanced filtering, financial summaries and analytics.
- Implements hexagonal architecture ensuring core domain independence from input and output adapters.
- AI-assisted movement registration via natural language input, automatically inferring amount, date, type and category from free-text descriptions. (in development)
- Repository: <https://github.com/josepereira1/ms>

About Microservices Website

SEP 2024 - PRESENT

- Knowledge base on microservices architecture patterns, distilled from Master's dissertation research and real-world implementation experience.

- Covers six pattern categories: Decomposition, Data Management (CQRS, Saga, Event Sourcing), Transactional Messaging, External APIs, Service Discovery, and Security.
- Built and deployed as a static site, linked directly to the academic dissertation as primary source.
- Website: <https://about-microservices.pages.dev/>

Education

University of Minho / Integrated Master's in Software Engineering

SEP 2016 - JUN 2023, BRAGA, PORTUGAL

Master's degree: Application Engineering and Software Systems Engineering

Dissertation: Study on the importance of the Principles and Patterns of Microservices Architectures (<https://hdl.handle.net/1822/85581>)

Speaking & Teaching

University of Minho / Guest Lecturer on Master's in Application Engineering

APR 2026 - APR 2026, BRAGA, PORTUGAL

- Invited by Professor António Nestor Ribeiro to guest lecture on Microservices Patterns, covering Saga, CQRS, and Domain Events, and how they address common distributed systems design challenges.
- Bridged academic foundations with real-world practice, sharing lessons learned from both the master's dissertation research and hands-on professional experience.
- Led a discussion on the Monolithic vs Microservices debate, advocating that architectural choices should be driven by context rather than trends.

Certifications

- AWS Certified Cloud Practitioner - Amazon Web Services

Languages

- Portuguese - Native
- English - B2