

Eliezio Oliveira

Lead Senior Software Engineer

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Athlone, Co. Westmeath, Ireland

PROFILE

Versatile and impact-driven engineer with a strong focus on backend systems design, performance optimization, and large-scale service reliability. Experienced in cloud migrations, data integrity, and API governance across distributed environments. Skilled at bridging infrastructure, development, and security teams to deliver scalable, maintainable, and high-quality software.

PROFESSIONAL EXPERIENCE

Technical Consultant 🏢 Apr 2025 - present

[RioCard Tecnologia](#) ^[1], Rio de Janeiro, Brazil

Contributed to the company's cloud transformation initiative, focusing on the migration of cryptographic infrastructure from IBM mainframe to cloud HSM solutions.

- Led the development of a cryptography abstraction service to centralize all application-level encryption and signing operations.
- Designed the service to route requests to downstream cloud HSM providers (initially AWS CloudHSM, later Oracle OCI Vault), with built-in fallback and retry mechanisms.
- Decoupled client applications from specific HSM implementations, accelerating migration and reducing integration complexity.
- Collaborated with information security group to ensure secure key management and compliance during the transition from on-premises to cloud-based environments.

Skills/Technologies: Java 17, Quarkus, SmallRye Fault Tolerance, Hexagonal Architecture, REST API, API First, OpenApi Generator, Hashicorp Vault, Docker, Kubernetes, AWS CloudHSM, Oracle OCI, Oracle PL/SQL, ArchUnit, Pact, Wiremock, Prometheus.

Senior Backend Software Engineer 🏢 Apr 2022 - Mar 2025

[Beeline Inc. \(formerly Utmost\)](#) ^[2], Dublin, Ireland

Contributed to the transformation of the main application to support multi-tenancy and improve scalability, reducing overall operational costs.

- Identified and resolved major performance bottlenecks caused by N+1 query patterns in both GraphQL resolvers and database queries.
- Introduced data loaders across the GraphQL layer and supported their adoption by coaching developers and providing implementation guidance.

- Collaborated with backend engineers to integrate jOOQ for complex and performance-critical queries, improving query efficiency and maintainability.
- Added integration tests to the CI pipeline to detect and prevent N+1 query issues, ensuring ongoing performance stability.

Skills/Technologies: Kotlin, Spring Boot, GraphQL, PostgreSQL, JPA/Hibernate, jOOQ, AWS, Docker, Kubernetes, Testcontainers, ArchUnit, Gradle, Gitlab

Senior Backend Engineer 🏢 Aug 2021 - Mar 2022

[Teckro Ltd](#) ^[3], Limerick, Ireland

Improved server–client integration reliability and eliminated contract mismatches through automation and formalized API governance.

- Introduced a CI-validated OpenAPI specification to formalize server–client contracts, eliminating recurrent integration issues.
- Partnered with front-end developers to automate the generation process using JavaScript scripts, ensuring synchronized schemas and faster delivery cycles.

Skills/Technologies: Kotlin, Spring Boot, OpenAPI 3, REST API, API First, MySQL, AWS, Docker, JUnit 5, Testcontainers

Senior DevOps Engineer 🏢 Aug 2020 - Jul 2021

[Aetion Inc.](#) (contractor via [BRQ](#)) ^[4], New York, USA

Automated the management of temporary database credentials, improving security and efficiency for data analysts' access to production systems. Designed and implemented an infrastructure-as-code solution to provision and revoke temporary MySQL credentials automatically. Developed a Python-based web application that allowed analysts to request and manage access with built-in expiration controls.

Skills/Technologies: Python 3, Pulumi, Terraform, MySQL, SAML, AWS (IAM, Lambda, RDS, APIGW, CodeBuild, ECR, S3, CloudWatch, Glue), Okta, Docker, Packer, Testcontainers, Flask, JavaScript, jQuery, Axios, Bootstrap

Senior Engineer 🏢 Jan 2019 - Jul 2020

[Ericsson Software Technology AB](#) ^[5], Athlone, Ireland

Strengthened the stability of Ericsson's ONAP CCSDK blueprint models by designing and implementing automated integration tests within the UAT framework, ensuring reliability across frequent upstream releases. This increased release confidence and reduced debugging cycles by integrating [UATs](#) into the CI/CD pipeline. You can view my contributions [here](#).

Skills/Technologies: Kotlin, Python 3, Spring Boot, Mockito, Docker Compose, WireMock, Pitest

Lead Software Engineer 🏢 2008 - 2014, 2016 – 2018

RioCard Tecnologia ^[1], Rio de Janeiro, Brazil

- Resolved major security, performance, and reliability issues in RioCard's contactless card operations by leading the design and development of a unified, server-centric architecture with lightweight terminals and 3rd-party ATM integration.
- Increased system reliability to near-100% under peak loads and expanded the company's service reach through hundreds of 3rd-party top-up venues.

Skills/Technologies: Java, Netty, Websockets, Java Cryptography Extension, TLS, PKIX, Spring Boot, MyBatis, JavaScript, jQuery, SOLID, Java Smartcard I/O (JSR 268), ISO-7816, MIFARE Classic/Plus, HSM, Spock Framework, TDD, Spring RESTDocs, C, Google C++ Test Framework, Jenkins, Micrometer, Prometheus, Grafana.

EDUCATION

Bachelor of Computer Science

Universidade Federal do Rio de Janeiro (ranked 5th in QS Latin America 2025)

Final Year Project: [Implementing TLS Extensions on OpenSSL \(RFC 3546\)](#)

Certifications

- [Blockchain Specialization \(University at Buffalo\)](#)
- [Certified Developer for Apache Kafka \(Confluent\)](#)
- [Parallel, Concurrent, and Distributed Programming in Java \(Rice University\)](#)
- [Cryptography I \(Stanford\)](#)
- [Advanced Python Development Techniques \(Microsoft\)](#)

LANGUAGES

- English, C1 level (according to the [European language levels](#))
- Portuguese, native

Who's Who

[1] RioCard Tecnologia da Informação S.A. develops and manages the RioCard, an electronic ticketing system used across public transportation in the State of Rio de Janeiro, Brazil.

[2] Utmost develops extended workforce management solutions to streamline the sourcing, management, and payment processes for non-employee workers like freelancers and contractors.

[3] Teckro Ltd develops technology solutions to streamline clinical trials in the life sciences industry.

[4] Aetion Inc develops software and data analytics solutions for the healthcare industry, focusing on real-world evidence to support decision-making in drug development and health outcomes.

[5] Ericsson Software Technology, a subsidiary of Ericsson, focuses on developing software solutions for telecommunications, specializing in network management, cloud systems, and digital services for telecom operators and enterprises.

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