

# Miguel Couto de Almeida

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Personal Website | Linkedin | Github

## Education

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**Instituto Superior de Engenharia de Lisboa**, BSc in Computer Science and Engineering Sept 2019 – Jul 2023

## Experience

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**Software Development Trainee**, Infinera – Lisbon, Portugal Sept 2023 – Jul 2024

Contributed to the development and maintenance of a large-scale, microservices-based application in the R&D department, designed for planning, real-time control, and monitoring of multi-layer communication networks within an Agile Scrum environment.

- Implemented comprehensive testing strategies, including unit, integration, and end-to-end tests, significantly enhancing code quality and system reliability.
- Developed and maintained detailed component documentation, improving knowledge sharing and streamlining onboarding processes.
- Diagnosed and resolved software bugs, increasing system stability and performance.
- Collaborated closely with cross-functional Agile teams to ensure smooth project execution.

Technologies and Tools: Java 17, Spring, JSON, REST, Protobuf 2, gRPC, Kafka, Docker, Nginx, OracleDB, JPA, Hibernate

**Speaker**, Bitcoin Atlantis Conference – Funchal, Madeira Mar 2024 – Mar 2024

As the Co-Founder of our Bitcoin Education Project, I had the unique opportunity to take the lead in planning and arranging an entire day of educational content for the Portuguese audience at the Bitcoin Atlantis Conference in Funchal, Madeira, in March 2024. With over 3,000 attendees, and invited by André Loja, the Founder of FREE Madeira, I organized a comprehensive series of lectures and workshops designed to deepen understanding and practical use of Bitcoin, such as:

- Defining the Problem and Designing the Solution with Bitcoin
- How Bitcoin Works and The Bitcoin Standard
- On-Chain and Lightning Network Usage for Merchants and End Users
- Self-Custody, Security, and Privacy Concerns
- Bitcoin Inheritance Solutions

**Co-Founder & Host**, Aceita Bitcoin Jan 2020 – Present

Co-founded "Aceita Bitcoin", an initiative aimed at promoting Bitcoin education and adoption in Portugal. Featured by the Portuguese Mises Institute and recognized in the Região de Leiria journal for its discussions on bitcoin-economics. As part of this initiative, I also host the podcast, where I engage with prominent figures from various sectors, including engineers, economists and university professors.

## Projects

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**Battleships App** github.com

Full-Stack Web and Mobile Application (Android) that allows multiple players to play the classic Battleships game online and cross-platform

- Technologies and Tools: Kotlin, Spring Boot, React, Typescript, Android Development, Jetpack Compose, Docker, Nginx, PostgreSQL

**Document Workflow Platform** github.com

Full-Stack Web Application for document workflow that provides users with a permission-based and signature-oriented platform to ease the validation, editing, and sign process of a group of documents through a

chain of users.

- Technologies and Tools: Kotlin, Spring Boot, React, Typescript, Docker, PostgreSQL

### **Landmark Identification App**

github.com

Built a distributed system for submitting and executing cloud computing tasks, designed to detect and verify the existence of famous landmarks in images. The system adapts to load variations (elasticity) and processes tasks using integrated services from Google Cloud Platform.

- Technologies and Tools: Java, Cloud Functions, Pub/Sub, GCP, Compute Engine, Vision API, gRPC, Protocol Buffers, Google Maps API, Cloud Firestore

### **BORGA Web App**

github.com

Web Application for User Managed BoardGame Groups from Board Game Atlas Website and API

- Technologies and Tools: Javascript, NodeJs, ExpressJs, Elasticsearch, Handlebars.

### **Chess4Desktop**

github.com

Simple desktop Chess App using Kotlin with Desktop Jetpack Compose and MongoDB

- Technologies and Tools: Kotlin, Jetpack Compose, MongoDB.

### **JSON Parser Library**

github.com

Developed a custom JSON parser library in Kotlin, leveraging JavaPoet for code generation and JMH for benchmarking performance. The project also utilized Kotlin's reflection library to provide efficient parsing capabilities. Focused on optimizing speed and flexibility for various data structures.

- Technologies and Tools: Kotlin, JavaPoet, JMH, Kotlin Reflection

## **Technologies**

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**Languages:** Java, Kotlin, JavaScript, Typescript, Python, SQL, PL/pgSQL

**Frameworks/Tools:** Spring, NodeJS, gRPC, Jetpack Compose, React, Bootstrap, Docker, Nginx, REST API, JSON, Protobuf, Siren Hypermedia

**Cloud Platforms:** Google Cloud Platform, Firestore, Pub/Sub, Cloud Functions, Compute Engine

**Databases:** PostgreSQL, MongoDB, Elasticsearch