

Marco Rocha

Software Engineer

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Full-stack software engineer focused on building scalable, cloud-native applications. Strong background in DevOps, machine learning, and distributed architectures, with expertise in backend development (Python, JavaScript, Java) and API-driven web frameworks.

💡 WORK EXPERIENCE

ML Research Intern, INESC TEC

Mar 2025 – Jul 2025

- Conducted master's thesis research in **Explainable AI** (graded 19/20), developing **deep learning** facial recognition solutions in **Python** and proposing novel architectures published and presented at the **ICCV conference**.

DevOps Intern, ITSector

Feb 2023 – Jun 2023

- Developed automated **CI/CD pipelines** using **Azure DevOps** to streamline the product delivery process.
- Implemented **Infrastructure as Code** with **Terraform**, automating deployment for reliability and standardization.
- Collaborated with the development team to **optimize cloud infrastructure** performance and efficiency.

🔗 PROJECTS

VaxPred - Vaccine Development Web App

Contributed to a vaccine development **Angular** app as part of a **24-person Agile team**, implementing backend services in **Python (FastAPI)** and supporting multiple **CI/CD automation pipelines** with **Docker** and **Google Cloud**.

Nexus - Full-Stack Social Network

Engineered a social networking platform with **Laravel (PHP)**, building **RESTful CRUD APIs** backed by an **ORM** and delivering features such as user profiles, posts, groups, notifications, direct messaging, and real-time video chat.

Distributed Local-First Shopping List Website

Created a **local-first** collaborative shopping list app in **HTML, CSS** and **JavaScript**, designed for **high availability** and **fault tolerance** with offline support and **CRDT**-based sync for **data consistency**.

Ranked Multiplayer Game Server

Developed a multiplayer game server in **Java** using **TCP sockets**, featuring ranked matchmaking with **load-balancing**, **concurrency-safe** threading and **fault recovery** mechanisms for a **scalable** architecture.

🎓 EDUCATION

Master in Informatics and Computing Engineering

Sep 2023 – Jul 2025

Faculty of Engineering of the University of Porto

Final grade: 18/20

Bachelor in Informatics and Computing Engineering

Sep 2020 – Jul 2023

Faculty of Engineering of the University of Porto

Final grade: 18/20

💻 SKILLS

Programming Languages: Python JavaScript Java C/C++ HTML/CSS PHP PostgreSQL Go

Frameworks: Laravel Angular React Flutter (Dart)

Cloud / Tools: Azure Cloud Terraform (IaC) Docker Git Jira Linux Scripting

Strengths: Organized Fast learner Analytical thinker Reliable Eager to learn

🌐 LANGUAGES

Portuguese (Native), English (C1)