

Gabriel J. Rocha

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Education

Superior Polytechnic Institute of Gaya
Bachelor in Computer Engineering

Sept 2023 – May 2026

Experience

Software Engineer Intern
Celfinet

Porto, Porto
Summer 2025

- Integrated two independently developed data pipelines (SQL-based and MongoDB-based) by creating a unified reporting solution.
- Designed and implemented an API for an automated email reporting system in C#, aggregating and transforming data from both SQL and MongoDB sources.
- Enabled end-to-end visibility of the pipeline process, improving clarity and communication between teams.
- Reduced manual data-checking by automating the status reporting across disconnected systems.

Projects

Chess Engine

[github](#) 

- Created a full-featured chess engine with 10+ core features (including special rules and check/mate detection), utilizing Gradle for automated build and testing.
- Tools Used: Java, Gradle

URL Shortener

[github](#) 

- A URL shortener with user management. It is a full-stack application with error handling and database usage.
- Tools Used: Java, SpringBoot, Maven, PostgreSQL

Multi-Agent System for Traffic Control

[github](#) 

- Application that uses AI agents for traffic simulation and traffic light management, in order to minimize car waiting time. Supports emergency vehicles and accidents.
- Tools Used: Python, Spade, SUMO

Library Management System

2024

- Developed a web-based library management system using PHP and Oracle DB/PL/SQL to provide distinct, role-based interfaces for users and administrators to manage books, borrowing, searching, and reservations efficiently.
- Tools Used: Oracle Database, PL/SQL, PHP

Publications

Comparative Evaluation of Angular and React in the Context of Web Development and Front-end Security: A Systematic Review

Dec 2024

Carlos Sousa, **Gabriel Rocha**, José Monteiro, Miguel Magalhães

The Role of Computational Parallelism in Artificial Intelligence Learning Models

July 2025

Pedro Couto, **Gabriel Rocha**, Sérgio Lopes, Carlos Sousa, João Quintas

Technologies

Programming Languages: C#, Java, Python, PHP, SQL

Technologies & Frameworks: React, .NET, Maven, Gradle, Spring Boot, NUnit, PostgreSQL, MongoDB

Languages

Portuguese: Mother language

English: Advanced

French: Intermediate

Spanish: Beginner