Murillo Ventura Mendonça

Backend Software Engineer | C#/.NET | Java | Go | PostgreSQL | RESTful APIs | Keycloak | AWS

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Professional Summary

Backend Software Engineer experienced in developing, maintaining, and optimizing production backend systems, RESTful APIs, multi-tenant platforms, authentication integrations, cloud-hosted applications, observability tooling, and CI/CD workflows. Strong background in C#, .NET, PostgreSQL, Java, Go, Python, Keycloak, AWS, GitLab CI, Docker, and Grafana-based observability. Experienced with code review, automated testing, production debugging, performance optimization, and scalable backend development across fintech, market-data, enterprise, and research software environments.

Technical Skills

Languages: C#, Java, Go, Python, TypeScript, JavaScript, C++, SQL, R
Backend & APIs: .NET, RESTful APIs, API integrations, Spring Boot, Django, Flask, Node.js, Keycloak, Go backend services
Testing & Code Quality: code review, pull request review, JUnit, Mockito, Cucumber, .NET test framework, debugging, root cause analysis
Databases: PostgreSQL, MySQL, SQLite, Oracle DB, MongoDB, MariaDB
Cloud, DevOps & Containers: AWS, GCP, GitLab CI, Cloudflare, Docker, Kubernetes, Git, CI/CD, deployment automation
Observability: Grafana, Loki, Tempo, LGTM stack, tracing, production debugging
Frontend: Angular, React
Research & Parallel Computing: CUDA, MPI, multithreading, genetic algorithms, benchmark validation
Tools: VS Code, Visual Studio, IntelliJ IDEA, Eclipse, Vim, TeXstudio, TortoiseSVN

Professional Experience

Communify 2025 – Present
Software Engineer Remote

- Developed and maintained C#/.NET backend services and RESTful APIs for a multi-tenant platform handling user, account, and market-data workflows for multiple clients at scale.
- Reviewed pull requests from other engineers, evaluating code correctness, maintainability, edge cases, backend behavior, and alignment with business requirements.
- Wrote and maintained automated tests using the .NET test framework to validate backend behavior and reduce regressions.
- Engineered custom Keycloak authentication plugins and integrations to centralize MFA handling for desktop users and thousands of mobile users.
- Built internal release-management tooling integrated with GitLab CI, AWS, Cloudflare, and Jira APIs to control multi-tenant deployments across multiple application tiers.
- Automated release workflows that enabled non-technical staff to manage deployments and reduced deployment effort by 50%.
- Optimized PostgreSQL queries, data models, and backend workflows in a production environment focused on scalability, reliability, and maintainability.
- Improved average response time by more than 30% on critical-path queries after optimizing the most frequently used database operations.
- Improved backend observability by working with a containerized LGTM stack, using Grafana, Loki, and Tempo traces to identify slow execution paths and guide performance optimizations.
- Collaborated across backend, DevOps, and product workflows to deliver features, investigate production issues, evaluate technical trade-offs, and improve release processes.
- **Technologies:** C#, .NET, PostgreSQL, TypeScript, Keycloak, Java, Python, GitLab CI, AWS, Cloudflare, RESTful APIs, Docker, Grafana, Tempo, Loki.

Itexto 2024 – 2025
Junior Software Engineer Hybrid – Belo Horizonte, MG

- Maintained and enhanced legacy and modern web applications for multiple clients across backend, frontend, database, and cloud environments.

- Reviewed code and pull requests from other engineers, checking implementation quality, requirement coverage, regressions, and maintainability.
- Wrote and maintained automated tests using JUnit, Mockito, and Cucumber to validate backend behavior and business rules.
- Implemented backend and frontend features using Java, Spring Boot, Angular, React, Python, Django, Go, RESTful APIs, and relational databases.
- Developed Go backend services, including a REST backend and a video-processing microservice responsible for processing video data before storing files in AWS S3.
- Debugged and maintained cloud-hosted applications on AWS and GCP, supporting deployment, troubleshooting, and operational workflows.
- Worked with containerized application environments using Docker and Kubernetes as part of client project maintenance and deployment workflows.
- Adapted to different technical stacks and codebases using MySQL, PostgreSQL, SQLite, JavaScript, TypeScript, Python, Java, and Go.
- Delivered application maintenance and feature development for client-facing projects with changing requirements, priorities, and quality constraints.
- **Technologies:** Java, Spring Boot, Go, Angular, React, JavaScript, TypeScript, Python, Django, MySQL, PostgreSQL, AWS, GCP, RESTful APIs, Docker, Kubernetes, JUnit, Mockito, Cucumber.

Embraer S.A. 2021 – 2023
Software Engineering Intern Hybrid – São José dos Campos, SP

- Implemented and maintained internal web applications used by business areas to support operational processes and internal tooling.
- Maintained enterprise databases, backend logic, and legacy ColdFusion applications in a corporate software environment.
- Contributed to an internal portal that centralized tools, workflows, and applications for multiple departments.
- Investigated issues in legacy systems while supporting database maintenance, internal applications, and enterprise infrastructure tools.
- **Technologies:** ColdFusion, Oracle DB, TortoiseSVN, Windows Server.

Projects

GASS-Metal May 2022
Scientific Article / Research Software Federal University of Itajubá

- Adapted the GASS method to identify metal-binding sites in proteins using templates based on M-CSA and MetalPDB data.
- Validated research results against benchmark datasets, expected outputs, and defined test cases to evaluate correctness and method quality.
- Optimized parameters of a parallel genetic algorithm and contributed to the public web server gassmetal.unifei.edu.br.
- Led the definition and implementation of the parallel-processing strategy for protein data, selecting a spatial clustering approach that improved result quality and reduced processing time.
- Applied C++, Python, Flask, and multithreading to research software, protein-data processing, validation workflows, and web-server development.
- Co-authored a scientific article published in Briefings in Bioinformatics.
- Awarded first place at the university's undergraduate scientific research contest for work on this project.

Education

Bachelor's Degree in Computer Engineering Started Feb 2018
Federal University of Itajubá – Itabira

Languages

Portuguese: Native | English: Fluent | Spanish: Professional

Certificates

Advanced English Certificate – Excel Language School Issued Jun 2017; no expiration date