Guilherme Martinelli Taglietti

Backend Software Engineer | Distributed Systems | AI & High-Performance Computing

Brazil (Remote)

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Professional Summary

Backend Software Engineer with strong experience in distributed systems, scalable backend architectures, and AI-driven solutions. Specialized in Python backend development, microservices, asynchronous processing, and LLM integrations. Solid background in high-performance C++ algorithms, genetic algorithms, and parallel computing. Experienced with cloud infrastructure, containers, and production-grade deployments. Built and operated a security-focused SaaS product from scratch with a small team, covering backend architecture, AI agents, RAG pipelines, DevOps/CI/CD, VPS deployments, payments, i18n, and end-to-end product delivery.

Professional Experience

Software Engineer (Backend / Fullstack)   *Sep 2024 – Present*
DocQ — Dover, Delaware, USA (Remote)

- Designed and developed distributed backend microservices in Python using FastAPI and Flask.

- Architected asynchronous systems with background processing, queues, and workers using Redis and Celery.

- Implemented AI and LLM integrations in the backend core to enable intelligent workflows and automation.

- Built and operated task pipelines and background jobs with reliability and cost efficiency.

- Containerized services using Docker and Docker Compose.

- Deployed and operated applications in Linux environments with AWS infrastructure.

- Developed frontend interfaces with Vue.js, React.js and Bootstrap to support backend workflows.

- Strong SQL and PL/pgSQL skills with PostgreSQL, including database design, performance tuning, triggers, stored procedures, migrations, caching strategies, and optimized queries.

- Collaborated with cross-functional teams on software architecture, scalability, and delivery.

Software Developer — Research and Academic Systems   *Jul 2022 – Sep 2024*
Universidade de Passo Fundo — FabSoft

- Developed a high-performance genetic algorithm in C++ for conflict-free university timetabling.

- Applied parallelism, advanced heuristics, and data structures using OpenMP and multithreading.

- Automated experiment execution and data pipelines with Bash scripts, including parameterized runs, batch processing, and result collection for the genetic algorithm and Python tooling.

- Designed and implemented a Java web application using JSF, PrimeFaces, and JasperReports.

- Built Python scripts for data validation, preprocessing, and structured JSON reporting.

- Worked with SQL databases (MySQL and MariaDB), managing large datasets, optimizing queries, and performing routine backups and maintenance.

Teaching Assistant & Instructor *Jan 2022 – Jul 2022*
Universidade de Passo Fundo — UPF

- Co-taught competitive programming and led the ZZ-On web development course, mentoring 30+ students.

- Developed web applications with PHP and JavaScript.

- Conducted data science research using Python, Jupyter, Pandas, NumPy, and Matplotlib.

SaaS & Entrepreneurial Project

Kyntra — AI-Driven Red Team & Security SaaS *Member and Software Engineer*

- Built an end-to-end SaaS product from scratch with a small team, focused on red team automation, pentesting workflows, and attack vector exploration.

- Implemented backend architecture using Python and FastAPI, integrating distributed processing, task pipelines, and scalable service design. Architected, built and developed frontend using React.js, Redux, Tailwind CSS, Bootstrap and MaterialUI.

- Developed AI agents and intelligent automation using LangChain, LangGraph, Retrieval-Augmented Generation (RAG), and vector databases.

- Delivered the full SaaS ecosystem including landing page, user management, subscription flows, payment gateway integration, and internationalization (i18n).

- Designed and operated the production setup with Docker, Docker Compose, CI/CD pipelines, and Linux VPS deployments.

Education

Bachelor's Degree in Computer Science
Universidade de Passo Fundo (UPF) *2022 – 2025*

Technical Skills

Languages: Python, C++, Java, JavaScript, TypeScript, PHP, SQL, PL/SQL
Backend: FastAPI, Flask, REST APIs, gRPC, GraphQL, Microservices, Redis, Celery, AsyncIO
AI & Data: LLM Integrations, LangChain, LangGraph, AI Agents, RAG, Vector Databases, Tensorflow, Genetic Algorithms, Pandas, NumPy
Frontend: React.js, Vue.js, Tailwind, Element Plus, MaterialUI, Bootstrap, i18n
Databases: PostgreSQL, MySQL, Oracle, MongoDB, Vector Databases
Infrastructure: Linux, Docker, Docker Compose, AWS, CI/CD, VPS Deployment
Product & SaaS: SaaS Architecture, Payments, Subscriptions, Authentication, Automation Workflows
Concepts: Distributed Systems, Multithreading, Algorithms, Data Structures

Courses & Certifications

- Modern Advanced C++ Course — Udemy (UC-439ae987-261e-45a3-bc13-7ad6f70a321c)

- Mastering Data Structures & Algorithms using C and C++ — Udemy (UC-ab722506-1517-4637-b5a2-bc858cd7170f)

- TensorFlow: Machine Learning and Deep Learning with Python — Udemy (UC-43ad56a5-618f-45cf-a688-e8d97d337399)

- Java Best Practices for Efficient, Scalable, and Secure Code — Udemy (UC-bd118b48-1dcb-4d70-8850-944a5ef2e5cd)

Events & Competitions

- Brazilian Informatics Olympiad (OBI)

- SBC/ICPC Programming Contest — South America (Multiple Phases)

- The Developers Conference (TDC) — São Paulo

- Gramado Summit

- Porto Alegre Summit

- BSides BSB — Brasília

Other

Beecrowd Profile (Competitive Programming):
judge.beecrowd.com/pt/profile/625773

Languages

Portuguese (Native)
English (C2 — Proficient)