

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.

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 and Bootstrap to support backend workflows.
- Collaborated with cross-functional teams on software architecture, scalability, and delivery.

Software Developer — Research & Academic Systems

2022 – 2024

Universidade de Passo Fundo (UPF)

- Developed a high-performance genetic algorithm in C++ for conflict-free university timetabling.
- Applied parallelism, advanced heuristics, and data structures using OpenMP and multithreading.
- Designed and implemented a Java web application using JSF, PrimeFaces, and JasperReports.
- Built Python scripts for data validation, preprocessing, and structured JSON reporting.

Teaching Assistant & Instructor

2023 – 2024

Universidade de Passo Fundo — FabSoft

- Co-taught competitive programming and led the ZZ-On web development course, mentoring 50+ students.
- Developed web applications with PHP and JavaScript.
- Conducted data science research using Python, Jupyter, Pandas, NumPy, and Matplotlib.

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

AI & Data: LLM Integrations, LangChain, LangGraph, Tensorflow, Genetic Algorithms, Pandas, NumPy

Frontend: Vue.js, Bootstrap, JSF, PrimeFaces

Databases: PostgreSQL, MySQL, Oracle, MongoDB

Infrastructure: Linux, Docker, Docker Compose, AWS, CI/CD

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)