

MATEUS PIM SANTOS

Software Engineer | Backend & Platform

Python | FastAPI | Distributed Systems | PostgreSQL | Kubernetes | Linux | Go

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Professional Summary

Software Engineer with 6+ years of experience designing backend services, distributed automation platforms, and production applications. Python-first, with deep practical experience in FastAPI, Django, PostgreSQL, RabbitMQ, Celery, Linux, and Kubernetes. Owns delivery from architecture and implementation through automated tests, CI/CD, cloud deployments, database performance, and incident response; also builds React/TypeScript applications, Go terminal tools for Linux, and public Omarchy desktop extensions.

Experience

Globalsys

Sep 2025 – Present

Software Engineer

Brazil / Remote

- **RPA orchestration platform (staging):** Designed and built the next generation of a multi-tenant RPA platform from its first commit using Python/FastAPI, PostgreSQL, RabbitMQ, Redis, Celery, and React/TypeScript; led the new application architecture and core backend delivery.
- Designed a DDD-inspired modular monolith with domain-specific schemas, ports and adapters, strict tenant isolation, RBAC, Unit of Work, domain events, transactional outbox, audit logging, and idempotent workflows.
- Built distributed orchestration with RabbitMQ exchanges and per-tenant queues, priority dispatch, scheduled jobs, and WebSocket agent communication with token-revocation handling; streamed live activity over SSE.
- Implemented marketplace and runtime features including an append-only credit ledger, queue admission, just-in-time secrets injection, execution output controls, and signed agent releases; documented architectural decisions and built automated tests with Testcontainers and contract gates.
- Owned the CI/CD and Oracle Cloud Infrastructure staging deployment path: PR checks, ARM64 image builds, OCI Container Registry, OKE/Kubernetes rollout, OCI Vault, Cloudflare-restricted access, and Ansible-managed TLS-only RabbitMQ.
- **WhatsApp chatbot (production):** Maintained Django chatbots for customer service, lead qualification, and service scheduling; led migration from a messaging provider to Meta WhatsApp Business API, including WABAs, webhooks, templates, media, Celery processing, and deduplication.
- Optimized a Django workflow processing approximately 100,000 records, eliminating N+1 queries and redundant data loading to cut response time from **about 2 minutes to under 2 seconds**.
- Built customer recognition with Databricks Delta Sharing and DuckDB; improved ERP-outage resilience, human-agent handoff with signed integrations and retries, and private access to customer media.
- Helped restore production service during a sales-driven traffic surge by troubleshooting Celery/Redis backpressure, controlling intake, and safely draining queues; also investigated job overlaps and storage pressure.
- **Enterprise CRM/contact center:** Primary contributor to a large React/TypeScript operator backoffice featuring live chat, unified queues, scheduling, telephony, campaign journeys, and role-based screens; worked directly with product stakeholders.
- Expanded frontend automated coverage from roughly 35 to **2,000+ tests**; introduced an OpenAPI-generated typed client with runtime validation and contract-drift checks; resolved dependency advisories, an XSS issue, and tightened Content Security Policy.
- Contributed backend fixes in C#/.NET using DDD and Clean Architecture, SQL Server, Microsoft Entra ID, and Azure Service Bus.

Eldorado Institute

Software Analyst

Mar 2020 – Apr 2025

Campinas, Brazil

- Led a Python/Flask web platform and APIs managing thousands of smartphones for engineering and testing, with inventory tracking, authentication, reports, and AWS-backed data services.
- Delivered approximately **50% higher operational efficiency**, **80% less manual intervention**, and **60% faster test initiation** through workflow automation.
- Automated laboratory hardware and data collection using Python, Arduino, and ESP32, reducing manual work by approximately **70%** in selected processes.
- Built Flask, Pandas, NumPy, and OpenCV data analysis/visualization tools and contributed to international smartphone image-quality research and reproducible testing methods.
- Collaborated in English with engineering teams from the U.S., China, and India through meetings, technical presentations, and documentation.

Eldorado Institute

Software Intern

Sep 2019 – Feb 2020

Campinas, Brazil

- Developed Python scripts for camera image-quality test automation and documented repeatable laboratory procedures.

Selected Projects & Open Source

OmaReach / Omarchy Mosaic / Volta

Omarchy, QML, Hyprland, PipeWire

- Published Omarchy shell plugins for monitor-edge reservation with live system telemetry, multi-stream tiling with fullscreen containment, and independent stereo audio control; integrated with Linux desktop APIs and documented install, security, and usage flows.

OmaDroid / OmaMods

QML, ADB, scrcpy, Python

- Built an Omarchy plugin for Android discovery, wireless pairing and scrcpy mirroring over ADB, and a Python TUI for reversible Steam/Heroic mod installations (in active development).

luma / tela

Go, DDC/CI, Flutter, Android

- Created a Go TUI for monitor brightness control and a privacy-conscious Android wallpaper app with reproducible containerized builds and signed APK releases.

Homelab

Proxmox, ZFS, Ansible, Cloudflare, Tailscale

- Operate two Proxmox hosts, a 4 TB ZFS NAS with separate backup disk, automated LXC environments, Gitea Actions, Zero Trust access, and self-hosted media, photo, and collaboration services.

Technical Skills

Languages: Python, Go, TypeScript, JavaScript, SQL, C#

Backend: FastAPI, Django, Flask, Celery, SQLAlchemy, Pydantic, REST/OpenAPI, .NET

Distributed Systems: RabbitMQ, Redis, WebSockets, SSE, outbox, domain events, queues, idempotency

Databases: PostgreSQL, SQL Server, MySQL, DuckDB; query/index optimization, EXPLAIN ANALYZE

Cloud/Platform: OCI, OKE/Kubernetes, OCI Vault/Registry/Object Storage, AWS (EC2/S3/RDS), Docker

DevOps: Azure DevOps, CI/CD, GitHub Actions, Ansible, Linux, Bash, Nginx, Proxmox, Cloudflare

Frontend: React, TypeScript, TanStack Query, Zustand, SignalR, MSAL, React Flow

Architecture/Quality: DDD, Clean Architecture, multi-tenancy, RBAC, ADRs, pytest, Testcontainers, contract testing

Education & Languages

University of Campinas (UNICAMP) – Bachelor of Technology in Systems Analysis and Development
2018–2021

Portuguese: Native | **English:** Advanced professional proficiency; international meetings, presentations, and collaboration