

Gabriel Koerich | Software Engineer

Summary

Senior software engineer with 15+ years building production systems, coding since age 13. Most of my work is backends that do many things at once: queues, background workers, retries and concurrency.

I have written Rust since 2021 and I'm currently building Solana DeFi at Lulo. Previously founded Bulldesk, a marketing automation SaaS that ran 500M+ background jobs a month, acquired in 2021. BBA in Finance.

I also build AI tooling: I run Claude Code, Codex and OpenCode in parallel every day with [orch](#), an agent orchestrator I wrote in Rust, and help companies do the same.

gabriel@gabrielkoerich.com

github.com/gabrielkoerich

linkedin.com/in/gabrielkoerich

Core Competencies

Distributed Systems & Concurrency

- Event-driven and queue-driven backends: background workers, retries, idempotency and at-least-once delivery
- 500M+ background jobs a month on Beanstalkd, Redis and SQS, on dedicated worker servers
- Async Rust with Tokio: worker pools, backpressure and keeping blocking work off the runtime

Blockchain Engineering

- Solana programs (Rust, Anchor) and EVM contracts (Solidity, Hardhat, Foundry), with unit, fuzz, property and integration tests
- DeFi integrations: CPI, composability, onchain and off-chain indexing

AI & Agent Orchestration

- Claude Code, Codex and OpenCode in daily production work, run in parallel with [orch](#)
- Agent workflows for planning, implementation, review, refactoring, docs and ops

Technical Skills

- **Languages:** Rust, TypeScript, Python
- **Data & messaging:** PostgreSQL, MySQL (replication, tuning), SQLite, Redis, Beanstalkd, SQS, Pub/Sub
- **Infrastructure:** Docker, GitHub Actions, Terraform, Ansible, AWS, GCP, Fly.io, Datadog, Sentry
- **Frontend:** Vue.js, React, Vite

Professional Experience

Senior Software Engineer, Lulo

November 2022 – Present

Smart contract development for the DeFi protocol. Implemented the lending aggregator contract. Designed a security pool that protects users against protocol hacks while earning yield, and a higher-yield pool with standard DeFi risk.

- Built an indexer that receives transactions through webhooks and dispatches jobs over GCP Pub/Sub
- Architected the protocol and its CPI integrations with major Solana protocols
- Built the SDKs and CLIs, with Rust unit tests and Anchor integration tests
- EVM protocol integrations with Solidity, Forge and Hardhat

Stack: Rust, Solana, Anchor, TypeScript, GitHub Actions, GCP, Pub/Sub

Solana Smart Contract Engineer, Freelance

October 2021 – November 2022

Moved to Rust as my primary language and shipped three Solana projects:

- NFT marketplace with custom auction mechanisms
- Price prediction game with an onchain oracle
- DeFi contract using Orca Whirlpools for liquidity

Each shipped with tests, TypeScript/Rust SDKs and CLI tooling.

Stack: Rust, Solana, Anchor, TypeScript, GitHub Actions

Senior Software Engineer, Covie

May 2021 – October 2021

Built scrapers and browser automation that collected policy and claims data from insurance company portals at high volume.

Stack: Symfony, Node, PostgreSQL

Founder, Bulldesk

September 2015 – May 2021

Founded and scaled the first Brazilian platform to combine marketing automation and CRM. Acquired in 2021.

- Designed an event-driven backend around queues: the automation engine, campaigns and email all ran on background workers
- 80M+ requests and 500M+ background jobs per month
- Automation engine processing 1M+ leads with 5 to 10 concurrent actions each
- Load-balanced app servers and dedicated worker servers, MySQL replication, Beanstalkd, Redis and SQS queues, real-time updates over WebSockets
- Led a team of 4 developers and ran infrastructure and DevOps, plus product, business and finance

Stack: Laravel, Node, MySQL, Beanstalkd, Redis, SQS, Vue.js, Stripe, AWS

Education

- **BBA Finance:** Universidade do Sul de Santa Catarina
- **English Language Studies:** LSI (London)

Languages: Portuguese (native), English (fluent)

Notable Projects

- **orch** (Rust, Tokio): background service that hands issues to coding agents in separate worktrees and opens the pull requests
- **passbox** (Rust, Swift): password manager for AI agents, a fingerprint releases one secret into one process
- **skills**: skills for AI agents, including Solana and EVM security audits
- **writing articles** about Rust, concurrency, queues, Solana and AI agents