

João Henrique Borchoski

SENIOR FULL-STACK ENGINEER · AI SYSTEMS

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Curitiba, Brazil · open to remote worldwide · Brazilian and Polish citizenship (EU work authorisation)

Six years building backend systems, the last two spent getting AI to survive contact with production — agents with tool-calling, retrieval over private corpora, and the guardrails that keep them honest. I care about where the safety lives: a prompt asking a model to behave is a wish, a test that fails the build is a guarantee.

EXPERIENCE

Senior Full-Stack Engineer

Contraktor

Remote · Brazil · Jan 2026 – present · Contract Lifecycle Management / LegalTech

- Lead a team of four engineers end to end, from backend services through to the interfaces on top of them.
- Architect AI features for production: agent runtimes with tool-calling, retrieval over private document corpora, and the validation layers between a model's output and a customer's contract.
- Built a five-stage pipeline that distils hundreds of contracts into a clause playbook — structural extraction without a model, 768-d embeddings in pgvector, similarity clustering, then LLM consolidation.
- Published an internal MCP server exposing the platform as 62 typed tools with full OAuth 2.1, where a reflection test fails the build if any new tool omits its destructiveness annotations.
- Built the organisation's central LLM cost service: idempotent ingestion from three producers, pricing versioned by effective date, and cost attributable per customer, area and operation.
- Standardised the team's AI-augmented workflow — authored agent skills and guard-rail rules, a spec-driven pipeline with four human gates, and parallel execution in isolated Git worktrees with adversarial review.

TypeScript · NestJS · Python · FastAPI · LangGraph · PostgreSQL · pgvector · Vertex AI · GCP · Kubernetes

Backend Developer

Fretefy

Hybrid · Brazil · Mar 2025 – Jan 2026 · Logistics / TMS

- Built and maintained integrations with four enterprise ERPs in Node.js, keeping operational data synchronised and consistent.
- Shipped an internal LLM assistant over vectorised company knowledge — development standards, HR processes and product documentation.
- Delivered customer-facing automated support for licence questions, order status and billing enquiries.
- Profiled and optimised API and backend service performance under growing load.
- Moved high-volume work onto asynchronous messaging with Azure Service Bus.

Node.js · TypeScript · PostgreSQL · Azure Service Bus · RAG · ERP integrations

Software Developer

Vamilly Inovações de TI

Hybrid · Brazil · Oct 2021 – Feb 2025

- Built APIs and backend services in Java with the Spring stack, and in Node.js with Express, TypeScript and TypeORM.
- Worked directly with frontend teams across Angular, React and Flutter.
- Led refactors that measurably cut response times and removed scaling ceilings.
- Introduced queues and asynchronous processing with Amazon SQS.

Java · Spring Boot · Node.js · TypeScript · TypeORM · PostgreSQL · Amazon SQS

SELECTED PERSONAL PROJECTS

School Finance Platform

In production. Replaced three manual documents for a municipal school's parent-teacher association. All LLM usage behind one interface with a null implementation, so the app stays fully usable with no AI. ~20k LOC, 19 features specified before implementation.

Industrial Production Control

Clean architecture with 347 isolated use cases, each testable without a database. Asynchronous import via RabbitMQ (HTTP 202 + background worker) removed timeouts on high-volume loads. ~70k LOC across API and frontend.

Water Distribution ERP

Maintained for roughly two years. 360 use cases, 38 entities, thermal receipt printing and real-time order updates over Socket.IO. Returnable-container domain modelling.

TECHNICAL SKILLS

LANGUAGES & RUNTIMES	TypeScript · Python · JavaScript · Java · SQL · Node.js 22 · Bun · Deno
BACKEND & ARCHITECTURE	NestJS · FastAPI · Express · Fastify · Spring Boot · DDD · Clean Architecture · CQRS · event-driven · multi-tenancy
AI & AGENTS	LangGraph · Vertex AI / Gemini · RAG · pgvector · MCP · tool-calling · structured output · LLM-as-a-judge · context caching · LLM FinOps
FRONTEND	React 19 · Next.js · Astro · Vite · Angular · Tailwind CSS · shadcn/ui · TanStack Query · Zustand · Zod · CASL
DATA & MESSAGING	PostgreSQL · Redis · Google Pub/Sub · RabbitMQ · Amazon SQS · Azure Service Bus · Socket.IO · SSE
CLOUD & PLATFORM	GCP · Kubernetes / GKE · Docker · GitHub Actions · Turborepo · Supabase · Railway · AWS S3
QUALITY & OBSERVABILITY	Vitest · Jest · Playwright · Pact · Storybook · Sentry · Prometheus · Metabase
SECURITY	OAuth 2.0 / 2.1 provider · JWT + JWKS · MFA / TOTP · capability-based RBAC · tenant isolation verified by test · AES-256

EDUCATION

BSc, Artificial Intelligence — PUCPR	Feb 2022 – Jun 2026
Full-Stack Web Developer (2000h) — Kenzie Academy Brasil	–
Languages: Portuguese (native) · English (advanced)	–