Willian Guedes

Senior Backend & AI Engineer

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SUMMARY

Backend and AI engineer who designs, ships and runs systems in production, from architecture and data model to infrastructure and the AI layer. At Makin I architected a fintech's payment integration with about 50 VTEX stores, led a subscription migration in Go, and cut a platform's infrastructure costs by ~60%. On my own, I built and operate Nehva CRM, with advanced WhatsApp Business API access approved by Meta.

EXPERIENCE

Software Engineer Mar 2023 – Present

Makin · Software consultancy, multiple client projects

- Architected a Node.js payment integration between a fintech's payment provider and about 50 VTEX stores (purchases, cancellations, payment splits) using asynchronous event processing on AWS SQS.
- Led the migration from one-time purchases to subscriptions with a credit system: designed the end-to-end flow and relational data model, and built the core services in Go with a focus on concurrency, reliability and high request throughput.
- Implemented a client's e-commerce system serving Brazil and Colombia: integrations with CRM, payment gateway and Azure services, telemetry and logging with Application Insights, and protections against attacks on the checkout.
- Moved search and recommendations from SQL queries to Apache Solr, reducing API response times by 70%.
- Traced a video e-commerce platform's main cloud cost to S3 egress and led the full migration of compute, databases and object storage, cutting infrastructure costs by ~60% with no loss of performance.
- Implemented monitoring and observability with Prometheus and Grafana on a video e-commerce platform.
- Built the backend of an AI education platform in NestJS and LangChain: conversational agent with RAG (Pinecone), fine-tuned models and real-time streaming responses, from architecture to AWS deployment.
- Replaced manual deploys with CI/CD on Docker and GitHub Actions, cutting deploy time by 75%, with rollback by re-running a previous version; infrastructure as code with Terraform and Ansible.
- Built Python automation for large-scale marketplace catalog ingestion: normalization, validation and multilingual sync across regions.
- On a video marketplace, improved search, event tracking, Web Vitals and SEO alongside the marketing and SEO teams, contributing to an 85% increase in user acquisition.

Software Developer Aug 2021 – Nov 2022

UmTroco · Food service business

- Built the company's inventory management app, replacing manual stock control, and its website (Node.js, React Native, MongoDB, React).

INDEPENDENT PROJECTS

Nehva CRM — WhatsApp and Instagram inbox for small stores · solo project github.com/Willianwg/nehva-crm-case-study

- Multi-tenant TypeScript backend (Hono API, PostgreSQL): the API alone owns data, auth and tenant rules, with isolation tests on every route that takes an id and automated tests across API, domain and web.
- Meta webhooks are verified, stored before processing and handled by a worker with bounded retries; outbound webhooks go through a transactional outbox; public REST API.
- Registered Meta Tech Provider (WhatsApp Cloud API Embedded Signup and Instagram messaging), with advanced access to WhatsApp Business messaging and management approved by Meta. Self-deployed with Docker Compose and Caddy.

Cobrowser — autonomous browser agent · Python, Browser Use, Playwright, MCP

- Runs tasks in web apps from natural language: resolves intent before opening the browser, stops runs stuck on repeated actions, cuts tokens per step (DOM pruning and history compaction), works across LLM providers, traces with Langfuse and is exposed as an MCP server.

OPEN SOURCE

Activepieces — open-source automation platform (Zapier alternative, 25k+ stars) 2023

- 9 merged pull requests, including 6 new integrations: VTEX, PostgreSQL, Amazon S3, StabilityAI, XML and MailerLite (TypeScript, Node.js).

SKILLS

Languages: Go, TypeScript, JavaScript, Python

Backend: Node.js, NestJS, Hono, REST APIs, webhooks, event-driven architecture, queues (AWS SQS), transactional outbox, multi-tenancy, Apache Solr, automated testing

AI: LLM agents, tool calling, RAG, LangChain, Pinecone, fine-tuning, OpenAI, Anthropic and Gemini APIs, MCP, Langfuse, AI-assisted development (Claude Code)

Cloud & DevOps: AWS (SQS, RDS, Lambda, S3), Azure, Docker, Terraform, Ansible, GitHub Actions, CI/CD, observability (Prometheus, Grafana, Application Insights)

Data: PostgreSQL, MySQL, MongoDB, Redis, SQL Server

Front-end: React, Next.js, React Native

CERTIFICATION & LANGUAGES

AWS Certified Solutions Architect – Associate (2023–2026) · English: full professional · Portuguese: native