NICOLAY CAMACHO

AI-NATIVE FULL-STACK SYSTEMS ENGINEER

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SUMMARY

Full-stack engineer building production systems since 2022, including high-reliability trading infrastructure and AI-native product tooling. I work end-to-end — React / Next.js front-ends, Python backends, and LLM-powered systems with structured generation, source-grounded retrieval, and operational guardrails. Strong bias toward reliability, deterministic interfaces around probabilistic systems, and engineering leverage through AI-assisted development infrastructure.

TECHNICAL SKILLS

Frontend: React 19, Next.js (App Router), TypeScript, Tailwind, TanStack Query, React Hook Form, Zod, Vercel AI SDK, Playwright, Vitest
Backend: Python (FastAPI, Flask), Node.js, PostgreSQL, REST + WebSocket APIs, async processing, background workers, Stripe
AI Systems: OpenAI, Anthropic, Gemini, LLM tool / function calling, schema-constrained generation, RAG, agent workflows, MCP, AI-assisted code review
Tooling & Infra: Git, Docker, GitHub Actions, pytest, ruff, ESLint, structured logging, contract validation, AI-native engineering infrastructure

PROFESSIONAL EXPERIENCE

Software Engineer (Full-Stack) — Kairon Labs, Belgium *Feb 2023 – Present*

- Designed and shipped trader-facing React / Next.js applications operating against real-time market data during live trading windows, with emphasis on predictable behavior under volatile market conditions.
- Built and maintained Python (Flask) backend services interfacing with Rust-based HFT trading infrastructure for market-data processing and trading operations.
- Authored Rust pull requests to the HFT infrastructure using an AI-assisted development workflow.
- Partnered directly with traders and quantitative teams to translate desk operations into reliable, low-friction software with predictable failure behavior.
- Maintained reliability of long-running production systems through monitoring, structured debugging, and operational tooling during live market windows.

INDEPENDENT ENGINEERING WORK

AI Front Desk — Founder & Solo Engineer
Full-cycle SaaS that turns any small-business website into an installable, source-grounded AI front desk.

- End-to-end ingestion pipeline: website crawl → structured profile synthesis from site content → reviewable AI assistant → embeddable widget overlaid on the owner's site.
- Embeddable widget architecture serving source-grounded answers from the business's own website content, not generic chatbot responses.
- Multi-tenant persistence, Stripe-based subscription, usage metering, and quota / rate-limit systems across paid tiers.

Structor — Open Source · github.com/nicolaycamacho/structor
Operational substrate for AI-native engineering — structured execution, governance, and validation across multi-repository agent workflows.

- Built shared governance layers for Codex, Claude Code, and other AI coding agents, architectural contracts, execution standards, validation rules, and operational context, enabling reproducible engineering workflows across repositories.
- Designed deterministic interfaces around probabilistic agents so generations are constrained by reproducible engineering rules rather than free-form prompting.
- Workspace bootstrapper installs pointer files, validators, and hook scaffolding across consumer repos for consistent agent behavior at scale.

EDUCATION & LANGUAGES

Bachelor's in Economics, Universidad Privada Boliviana
Full-Stack Web Development, Le Wagon, Brussels
Languages: English (Native) · Spanish (Native) · French (Conversational) · Dutch (Basic)