

Rafael Chavantes

AI Product Engineer | Forward Deployed and AI Solutions Engineer

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SUMMARY

Product engineer who takes ambiguous business problems to production software, end to end, working directly with client operators and product leads. Ships production TypeScript/Next.js systems by directing AI coding agents; reviews diffs and owns architecture and acceptance. Since 2021, has delivered LLM, Retrieval-Augmented Generation (RAG) and automation systems for US and international clients, using deterministic code where precision matters. Previously 9 years at Cisco owning business-critical systems for large enterprise customers (CCIE Voice #40912).

SKILLS

AI and LLM: Large Language Model (LLM) APIs (OpenAI), Retrieval-Augmented Generation (RAG), vector stores, document processing, AI output evaluation, agent orchestration, cross-model review, Model Context Protocol (MCP)

AI coding agents: Claude Code, Codex, OpenCode; skills, hooks and plugins; parallel work in git worktrees

Engineering: TypeScript, JavaScript, Next.js, React, Python, SQL (PostgreSQL), Supabase, Vercel, REST APIs and webhooks, Playwright, Vitest, Git, CI, test automation, shell scripting

Low-code and automation: n8n, Bubble (Bubble Ambassador), WooCommerce integrations, internal tools

Business: Client discovery and requirements, process mapping, root-cause diagnosis, prototyping and MVPs, stakeholder management, technical account management, project coordination, Design Thinking

EXPERIENCE

Product Engineer (Contract)

Oct 2021 - Present

US and international clients | Remote

- **Delivery:** works with client operators and product leads to scope, diagnose, prototype, ship and measure; every change goes through a written spec, cross-model review, re-run tests and approval before merge.
- **DOT Permit Routing (US oversize-load trucking):** evaluation showed the LLM inventing turns when turning state permit PDFs into routes, so route geometry moved to deterministic code and AI only reads the permits; route accuracy rose from ~60% to ~97%.
- **AskUpstream (premium agricultural newsletter):** years of paid analysis sat in an archive nobody could search; built a RAG assistant with cited answers (ingestion, retrieval, subscriber auth, chat, admin analytics); 171 active users, 3,691 AI messages.
- **GAP Smart Inventory (Alto Paraíso, e-commerce food brand):** automated inventory, invoicing and tax operations integrated with WooCommerce; stock losses down 60%, inventory-management time down 80%, sales from near zero to ~R\$200k/month.
- **Estate Map (estate-planning app):** kept high-stakes legal decisions rules-driven instead of delegated to an LLM: 25-step intake, deterministic eligibility rules, attorney escalation, document vault and an AI assistant.
- **Risk self-assessment tool (US nonprofit):** built for Artists at Risk Connection (ARC).

High Touch Operations Manager | Technical Account Management

Jan 2019 - Oct 2021

Cisco | Rio de Janeiro, Brazil

- Dedicated technical owner for América Móvil (Claro), one of Latin America's largest telecom groups; primary point of contact between business needs, engineering teams and delivery.
- Coordinated cross-functional technical projects across Collaboration and Data Center environments.

High Touch Engineer

Jun 2014 - Dec 2018

Cisco | Rio de Janeiro, Brazil

- Tech lead for the IP Telephony Project supporting the Rio 2016 Olympic Games.

- Root-cause analysis and resolution of critical issues in business-critical Cisco Collaboration environments for enterprise customers.

Customer Support Engineer

Nov 2012 - Jun 2014

Cisco | Rio de Janeiro, Brazil

- System-level troubleshooting of Unified Communications (SIP, H323, MGCP, SCCP) for large enterprise accounts across Latin America.

Technology Consultant

Mar 2011 - Nov 2012

HP | Brazil

- Led planning, design and implementation of Unified Communications solutions for a global mining company.

Network Engineer

Nov 2008 - Mar 2011

FMC Technologies | Brazil

- Managed Unified Communications infrastructure for Latin America and led projects from planning to deployment.

Network Analyst

Apr 2008 - Oct 2008

Rede D'Or | Brazil

- Data and voice network infrastructure across 40 remote offices and 3 major hospitals.

Network Analyst

Mar 2007 - Apr 2008

Orange Business Services | Brazil

- Enterprise data networks across Cisco and Nortel environments (BGP, OSPF, RIP).

Network Analyst

Jun 2005 - Aug 2006

PUC-Rio | Rio de Janeiro, Brazil

- Data and voice network infrastructure: routing, switching, security and IP telephony.

PROJECTS

Jax OS (open source) | github.com/rafachavantes/jax-os

- Agent-orchestration framework: a self-hosted cockpit for supervising AI coding agent teams that reads Claude Code and Codex hooks, routes specs and diffs to cold review by the opposite model, re-runs verification and logs merge approval.

EDUCATION AND CERTIFICATIONS

MBA, People Management and Organizational Leadership, Fundação Getulio Vargas (FGV), 2019 - 2020

Associate's Degree, Information Technology, Universidade do Sul de Santa Catarina (Unisul), 2011 - 2013

Design Thinking Specialist, Echos Innovation Lab, 2020

CCIE Voice #40912, Cisco

Bubble Ambassador, Bubble, 2025

Languages: English (full professional), Portuguese (native)