

Eric de Oliveira Souza

[Belo Horizonte, Brazil](#) | [LinkedIn](#) | [GitHub](#) | [Tech Blog](#) | [Portfolio](#) | eric.bh18souza@gmail.com

Senior Full Stack & AI Engineer with 8+ years of experience building production software across banking, healthcare, e-commerce, AI, legal-tech, and internal systems. I'm comfortable with architecture, technical direction, cloud infrastructure, and end-to-end delivery as both a hands-on developer and engineering leader.

Strong in React, Node, Python, and AWS, with practical AI engineering experience building LLM/RAG workflows, agents, and MCP integrations, and applying AI to improve software delivery.

EXPERIENCE

FOUNDING FULL STACK & AI ENGINEER | [TEAMEX](#) | FEB 2025 - PRESENT

- Founding engineer responsible for building, scaling, and operating Essential Estates, a production legal-tech platform owned by Summerall Law, a Silicon Valley law firm; owned product, engineering, people, and infrastructure end-to-end.
- Built the platform from zero to production using React and TypeScript on the frontend, with NestJS, PostgreSQL, and TypeORM on the backend.
- Led architecture and system design across API design, data modeling, scalability, maintainability, and reliable frontend/backend contracts.
- Designed and managed AWS infrastructure using S3, EC2, RDS, CloudFront, and ACM, with GitHub Actions CI/CD for automated deployments and reliability.
- Developed AI-powered features using Python and FastAPI, integrating LLMs and Retrieval-Augmented Generation (RAG) for intelligent document processing, automation, and knowledge-driven workflows.
- Recruited, onboarded, and led the engineering team; defined coding standards, code review practices, and delivery processes.
- Implemented Google Analytics 4 (GA4) to track user behavior, funnels, and product metrics, informing product and marketing decisions.

SR FULL STACK ENGINEER | [EXIT83](#) | JUN 2022 – FEB 2025

- Built UIs with React, Next, and Material UI for efficient patient and EEG data tracking.
- Developed scalable backend systems with Node, Nest, PostgreSQL, and DynamoDB, deployed on AWS.
- Integrated medical APIs for TMS session validation and EEG data automation, increasing accuracy.
- Optimized EEG and treatment workflows, reducing admin overhead and improving patient management.
- Improved performance with optimized queries and Redis caching, cutting report processing time.

FULL STACK ENGINEER | [ZRO BANK](#) | JUL 2020 – JUN 2022

- Developed and scaled the backend of the main financial app using Node, Nest, and PostgreSQL, implementing microservices with Apache Kafka to improve performance, reduce latency, and enhance scalability for high-volume transactions.
- Leveraged Sequelize ORM to simplify database interactions, reduce query complexity, and improve API response times.
- Built a financial remittance and client management system with React, Next, and Material UI on the frontend and Node, Nest, and PostgreSQL on the backend.
- Automated reporting workflows by generating Jira-based reports in Google Sheets through a Node/Express integration.

FULL STACK ENGINEER | [KOGNITA](#) | DEC 2018 – JUL 2020

- Developed a web platform integrating AI-driven heatmaps to help clients identify optimal business locations based on real-time data analysis.
- Built a full stack system using React, Next, and Material UI for a seamless UI, with Node, Nest, and PostgreSQL for scalable data management.
- Optimized AI data processing workflows and integration between the AI R&D team and the web platform, enabling accurate geospatial insights using AWS S3 as storage.

FULL STACK ENGINEER | [MUNDIALE](#) | JAN 2018 – DEC 2018

- Developed and maintained an e-commerce platform for an internet and telephone service provider in South America, improving the online purchase experience with a React, Next, and Material UI frontend and Node, Express, and PostgreSQL backend.
- Built a customer and plan management system, enabling efficient user listing and plan details visualization with a React, Next, and Bootstrap frontend and Node, Express, and PostgreSQL backend.

AI PROJECTS

- **Voice Receptionist Copilot:** dental clinic voice agent you can interrupt mid-sentence, with Whisper, gpt-oss tool calling, and Kokoro TTS.
- **Doc Extraction Copilot:** Gemini reads Brazilian boletos and invoices into typed JSON; code checks digits and totals and flags what fails.
- **Renda Fixa Copilot:** daily job where a Groq model finds Brazilian CDBs online; code verifies each quote and simulates tax and FGC.
- **Currency Copilot:** streaming chat with the Vercel AI SDK and Gemini; typed tool calls render as React rate cards, charts, and tables.
- **Job Application Copilot:** LangGraph agent that tailors resumes with hybrid RAG on pgvector and cited bullets checked in code.
- **Doc Processing AI:** RAG chat with citations using hybrid search (pgvector, full-text, RRF) and a cross-encoder reranker, RAGAS evals as a CI quality gate, and Langfuse tracing.
- **Profile MCP Server:** TypeScript MCP server giving Claude and other agents live access to my GitHub, Medium, and experience data.

TECHNICAL SKILLS & TOOLS

Languages & Frameworks: JavaScript, TypeScript, React, Next, Node, Nest, Express, Python, FastAPI

Databases & Data Handling: PostgreSQL, pgvector, SQLite, MongoDB, DynamoDB, TypeORM, Sequelize, Drizzle, Mongoose, Redis

Cloud & DevOps: AWS (S3, Lambda, EC2, RDS, CloudFront, ACM), Azure, Vercel, Docker, Kubernetes, GitHub Actions (CI/CD)

Architecture & System Design: Microservices, RESTful APIs, SSR, CSR, WebSockets, SSE, Apache Kafka, service-oriented architectures

AI Engineering: LLMs, RAG, agents, tool calling, vision, voice, LangGraph, LangChain, Vercel AI SDK, MCP, Gemini, Groq, RAGAS evals, Langfuse

AI Fluency: Claude, Claude Code, Cursor, ChatGPT, Cursor Bugbot; efficient at enhancing planning, coding, debugging, review, documentation, and delivery with AI-assisted workflows

Testing & State Management: Jest, Vitest, Playwright, pytest, Redux

Soft Skills: Leadership, adaptability, problem-solving, communication, cross-functional collaboration, US-hours flexibility

EDUCATION

BACHELOR IN [SYSTEMS ENGINEERING](#) | 2024 | [FEDERAL UNIVERSITY OF MINAS GERAIS](#)

The course focuses on designing, developing, and validating complex software systems by integrating user needs, architecture, quality, and performance to deliver innovative solutions.