

HECTOR MUÑOZ

(+52) 474-136-7606 · hectorm.flores09@gmail.com · Lagos de Moreno, Jalisco, México
[Portfolio](#) · [LinkedIn](#) · [GitHub](#)

PROFILE

Senior Full Stack Engineer with 5+ years shipping production applications across the full stack. Proficient in React, TypeScript, NestJS, and Node.js with AWS experience. Known for driving projects from concept to production, owning quality and testing – while mentoring developers and delivering end-to-end.

WORK EXPERIENCE

Senior Software Engineer | [Data Art](#) | Client: [Patracorp](#)

Remote

Aug 2024 - Present

- **PatraAI – Document Intelligence Platform:** Architected core NestJS/TypeORM APIs for an AI-powered SaaS processing complex insurance documents. Used SQS for async processing, Redis caching, and Cognito auth – enabling users to upload, extract, compare and validate structured data against source docs.
- **Email Threading & Configurability:** Owned the end-to-end solution – from email quoting strategy for conversation context to variable validation design and template creation UI with agent-facing variable insertion. Partnered with Product and Operations to align on requirements, secured cross-team buy-in, and delivered to production. Integrated threading into a NestJS/S3 pipeline processing 60,000+ emails/week without disruption. The template system with validated variables at company/global level reduced drafting time and ensured brand consistency.
- **Performance Engineering:** Refactored a self-referencing SQL model to MongoDB, cutting fetch/save times from ~10s to near-instantaneous for 1,200+ records/day. Introduced schema versioning for backward compatibility and built generic, reusable patterns that eliminated recurring incidents and reduced team cognitive load.
- **Testing & Mentorship:** Built an integration testing framework empowering the team to own quality end-to-end, significantly reducing regressions and QA dependency. Contributed to architecture decisions and mentored developers to boost delivery velocity.

Senior Software Engineer (AWS Full Stack) | [IBM](#) | Client: [USAA](#)

Remote

Nov 2023 - Aug 2024

- **Offline-First Stakeholder Demos:** Built a fully functional offline version using MSW before backend APIs were ready, enabling seamless demos that secured early buy-in and unblocked the product roadmap. Mock layer disabled transparently post-integration.
- **Product Strategy & Frontend Architecture:** Partnered with Product owners on high-fidelity demos and feasibility assessments, directly influencing feature refinement. Drove key decisions including TanStack Query for data fetching and Zod for runtime validation.
- **Test Coverage & Quality:** Delivered 80%+ unit test coverage and comprehensive E2E tests for critical financial services flows. Integrated automated a11y audits into CI, maintaining compliance with financial accessibility requirements.
- **Mentorship & Cross-Team Collaboration:** Mentored FE engineers on React best practices via pair programming and guided a developer through Angular debugging. Proactively tracked evolving API contracts, keeping the MSW mock layer in sync to prevent integration delays.

Full Stack Engineer | [Nextia](#) (Product: [Goroot.ai](#))

Remote

Feb 2023 - Nov 2023

- **Sole Engineer – Contact Center Platform:** Owned the full product lifecycle from feature ideation and solution design to implementation and production iteration. Independently conceptualized and built Goroot.ai from scratch – an omnichannel contact center (NestJS, Sequelize, PostgreSQL, Auth0, Bull queues) handling calls, WhatsApp, tasks, and campaigns. Delivered a working prototype in 2 months, iterating with 8 active agents for continuous feedback.

- **Messaging Automation:** Built a self-serve campaign builder enabling admins to target **1,200+ prospects** with a single click via pipeline filters, user segments, and WhatsApp templates. Included automated failure reporting with root-cause hints. **Setup time dropped from a full day to minutes; campaigns ran weekly without developer intervention.**
- **Platform Consolidation:** Consolidated fragmented call, messaging, and task tools into a unified platform for **Hybridge Education** – **8 agents** across MX and Argentina handling **1,000+ weekly contacts** from a single screen with real-time messaging and automated pipeline transitions. Later evolved into a standalone product.
- **Testing, Monitoring & Design System:** Implemented **E2E tests with Cypress Cloud** for video/change reports, plus backend unit tests on pipeline transition rules. Built campaign dashboards in **AWS QuickSight** tracking delivery and performance metrics. Created a comprehensive design system that remained the product foundation.

Front End Lead (AWS Full Stack) | [Mxmart Solutions](#)

Jul 2022 - Feb 2023

Hybrid

- **Clean Architecture Adoption:** Led a team of **3-5 engineers**. Pitched Clean Architecture to the CTO with a live demo, gained buy-in, and rolled it out across 3 projects including Ekownx – improving module visibility, encapsulation, and long-term maintainability.
- **High-Scale Delivery:** Inherited a non-functional student portal for Universidad de Guadalajara and delivered a production-ready experience serving grade access to millions of active users. Case study: <https://mxmartsolutions.com/caso-de-estudio-udg>
- **Lambda Optimization & Backend Standards:** Stepped in to support the backend team – established Python Lambda patterns and created a shared library eliminating cold-start latency. Fixed a critical Lambda chaining bug where a single query failure would bring down the entire system.
- **Real-Time Support Platform:** Engineered a real-time chat system using **AWS AppSync** and **WebSocket Lambda** for the internal ticketing platform, enabling agents and users to communicate in-app without leaving the application.

Full Stack Developer (Professional Practices) | Tecnológico Superior de

Jan 2020 - Jun 2022

Jalisco

- **Graduate Survey & Job-Bank Portal:** Designed and built a full-stack platform from scratch – graduates responded to surveys, uploaded CVs, and applied to jobs with role-based access for admins, companies, and graduates. Defined DB schema, delivered CSV report generation, and a modernized UI. Approved by the program coordinator, fulfilling graduation requirements.
- **Full-Stack Modernization:** Self-initiated migration of a university vehicle entry/exit system from legacy PHP to a React/Express stack – demonstrating the impact of modernizing institutional tools.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, C#

Frontend: React, Next.js, TanStack Query, Tailwind CSS, Storybook, shadcn/ui, Vite, React Router, Redux

Backend: NestJS, Express, Node.js, WebSockets (Socket.io), GraphQL

Testing / QA: Unit, Integration & E2E – Jest, React Testing Library, Cypress, Supertest, MSW

Cloud (AWS): EC2, Lambda, S3, API Gateway, Cognito, RDS, SQS, SNS, AppSync | **Azure:** NoSQL Tables, Blob Storage

Databases: PostgreSQL, MySQL, SQL Server, DynamoDB, MongoDB, Redis

DevOps & AI Tooling: Git, GitHub Actions, Docker, Claude Code, GitHub Copilot

EDUCATION

Computer Systems Engineer – Tecnológico Superior de Jalisco (2018-2022)

CERTIFICATIONS

AWS Certified Cloud Practitioner – Certified 2022 · Active production AWS usage 2022-present

ADDITIONAL INFO

Languages: English – Advanced | Spanish – Native