PEDRO LIZÁRRAGA BRAMBILA

Senior Software Engineer | Full-Stack | TypeScript, Node.js, React, Angular & GraphQL
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Professional Summary

Pedro is a Senior Software Engineer with 15+ years of experience building scalable, reliable full-stack web applications across healthcare, e-commerce, finance, transportation, and government. He works with TypeScript, Node.js, NestJS, React, Angular, GraphQL, and PostgreSQL, builds on Cloudflare Workers, Durable Objects, and Cloudflare D1, integrates Epic FHIR APIs, and holds the Apollo Graph Developer – Associate certification. He also builds AI agents with the Vercel AI SDK, conducts code reviews, and mentors engineers in cross-functional Agile teams.

Technical Skills

- **Languages & Frameworks:** TypeScript, JavaScript, Node.js, NestJS, Express.js, React, Next.js, Angular, Hono, Ruby on Rails, C#, ASP.NET/.NET
- **APIs & Architecture:** GraphQL, Apollo Server, Apollo Federation, REST, system design, software architecture, design patterns
- **Databases:** PostgreSQL, MySQL, SQL Server, Oracle, Cloudflare D1, Prisma, Drizzle
- **Cloud:** AWS Lambda, Amazon S3, Microsoft Azure (Azure AI Search, Azure Blob Storage), Cloudflare Workers
- **AI Engineering:** AI agents, LLM applications, OpenAI APIs, Vercel AI SDK, tool calling, RAG, workflow automation
- **Testing & Delivery:** Jest, Vitest, Playwright, Testcontainers, Docker, GitHub Actions, Bitrise, Azure DevOps, Git, CI/CD, Agile, Scrum, Kanban, Jira
- **Healthcare:** HL7 FHIR, Epic FHIR, healthcare data transformation, mapping, and normalization
- **Languages:** Spanish, English (B2+)

Professional Experience

Freelance Software Engineer | Independent

Remote, Mexicali, Baja California, Mexico | May 2022–Present

AI Appointment Agent for a Dental Clinic (in development) | Oct 2026–Present

- Developing an AI agent that answers patient questions and books, reschedules, and cancels appointments for a dental clinic over WhatsApp, with a team panel to take over conversations.
- Implemented tool calling and structured output with the Vercel AI SDK, code-enforced guards, and an evals suite.
- Built the backend on Cloudflare Workers, D1, and Hono and the panel with React, with Vitest tests and CI.
- Designed the solution as a reusable template, one deployment per client, to adapt it to other business niches.

Environment: TypeScript, Vercel AI SDK, OpenAI APIs, Cloudflare Workers, Durable Objects, D1, Drizzle, Hono, WhatsApp Cloud API, Better Auth, React, Vitest, GitHub Actions

Senior Software Engineer | Publicis Sapient

Remote, Mexicali, Baja California, Mexico | May 2022–Aug 2026

- Conducted code reviews and mentored and onboarded engineers joining the projects.

Healthcare Platform | Mar 2024–Aug 2026

- Built GraphQL and Node.js services in TypeScript for a patient-facing healthcare web and mobile app, owning the doctor search and details subgraph, system notifications, and caching in an Apollo Federation graph.
- Integrated Epic FHIR APIs (Practitioner, Patient, Appointment, DiagnosticReport, Observation, plus lab tests and medications), parsing source payloads into normalized domain models and joining Epic data with other subgraphs.
- Designed PostgreSQL models (notifications, preferences, Epic practitioner cache), GraphQL schemas, and resolver patterns.
- Strengthened delivery quality through Jest and Vitest test suites and cross-functional collaboration with frontend, mobile, QA, product, and engineering teams.
- Helped the React Native mobile team migrate Android and iOS pipelines from GitHub Actions to Bitrise.

Environment: TypeScript, Node.js, Apollo Server, Apollo Federation, GraphQL, PostgreSQL, Epic FHIR, Jest, Vitest, GitHub Actions, Bitrise

Document Search API | Sep 2023–Feb 2024

- Built a REST API with NestJS that enables search over proprietary documents using Azure AI Search semantic search and Azure Blob Storage.

AngularJS Migration | Sep 2022–Aug 2023

- Migrated an AngularJS (Angular 1) application to Angular 2+.

HR Reporting Tool | May 2022–Aug 2022

- Built a human-resources reporting tool with React and Vite.

Senior Frontend Developer | Fender Musical Instruments Corporation

Remote, Ensenada, Baja California, Mexico | Oct 2016–May 2022

- Built core experiences for Fender's dealer-facing B2B commerce platform, including product discovery, catalog, cart, ordering, and order-tracking workflows.
- Designed scalable Angular application structures and improved responsive behavior and navigation across key journeys.
- Connected frontend capabilities through serverless Node.js services running on AWS Lambda.
- Collaborated with product, backend, and QA functions in Agile teams to plan, implement, test, and release customer-facing capabilities.
- Conducted code reviews and mentored and onboarded engineers on the team.

Environment: Angular, TypeScript, Node.js, Express.js, AWS Lambda, Amazon S3, Agile

Senior Full-Stack Developer | docDigitales

Mexicali, Baja California, Mexico | Aug 2014–Oct 2016

- Migrated a legacy WebDev electronic-invoicing platform to a Ruby on Rails SaaS, module by module, covering invoicing, cost control, payroll, customer, and supplier workflows, with parallel redirects until the legacy application was shut down.
- Implemented full-stack functionality with Ruby on Rails, JavaScript, Bootstrap, and MySQL, balancing usability with dependable business processing.

Full-Stack Developer | Secretaría de Seguridad Pública

Mexicali, Baja California, Mexico | Apr 2012–Jul 2014

- Led development of SAFyS, a web application used to administer and track public-security funds and subsidies.
- Automated monthly accounting and reporting activities using C#, ASP.NET/.NET, JavaScript, SQL Server, and Oracle.

Software Developer | Grupo GM Transport

Mexicali, Baja California, Mexico | Sep 2011–Mar 2012

- Developed C# and ASP.NET administrative systems supporting transportation operations and back-office processes.

Software Developer | Seres Soluciones en Software

Mexicali, Baja California, Mexico | Mar 2010–Aug 2011

- Developed client-server business applications with WinDev, WebDev, MySQL, and HyperFile Classic.

Selected Projects

starter-template-nestjs | github.com/plizarraga/starter-template-nestjs | 2026

- Created a production-ready NestJS 12 starter with Better Auth, PostgreSQL-backed sessions, RBAC, user administration, Prisma, Pino, and Vitest with Testcontainers, to bootstrap new backend projects with consistent best practices.

finance-tracker | github.com/plizarraga/finance-tracker | Jan 2026

- Built a mobile-first personal finance tracker with Next.js (App Router), Prisma, PostgreSQL, Better Auth, and automated tests with Vitest and Playwright.

RAG Chat over PDFs (personal MVP) | Jul 2024

- Built an MVP that answers questions over uploaded PDFs using NestJS, PostgreSQL, OpenAI embeddings and chat completions, and ChromaDB.

Certifications

- Modern GraphQL with Node – Complete Developers Guide | Udemy | Jul 2024
- Apollo Graph Developer – Associate | Apollo GraphQL | Jun 2024
- TypeScript: Your Complete Guide and Handbook | Udemy
- Design Patterns in JavaScript and TypeScript | Udemy
- Clean Code and SOLID Principles | Udemy

Education

Bachelor of Engineering, Computer Systems Engineering | Instituto Tecnológico de Mexicali | Mexicali, Mexico | 2005–2009