Joaquín Emanuel Lizarraga

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PROFESSIONAL SUMMARY

Mobile & AI Engineer with 4+ years of experience architecting and delivering scalable cross-platform applications. Specialized in React Native, Expo, and serverless backend (Supabase, AWS) with AI integrations (LLM models, Embeddings, Pinecone). Proven track record improving performance, implementing CI/CD pipelines, and increasing test coverage above 85% in fast-paced HealthTech, Fitness, and Real Estate projects.

PROFESSIONAL EXPERIENCE

AI Engineer & Fullstack Developer — Onde (Real Estate AI Platform) *Remote*
Rabid Fish Labs *July 2025 – Present*

- Designed and built Onde, an AI-powered real estate platform with semantic, visual, and proximity-based search across properties, images, and documents.
- Implemented multi-pipeline retrieval using Pinecone (3 specialized indexes) and OpenAI embeddings (1536-dim text, 3072-dim image) with metadata filtering and deduplication.
- Developed a Supabase Edge Functions (Deno) "AI gateway" to orchestrate chat flows, intent classification, filter extraction, and RAG context building with less 3s end-to-end latency.
- Integrated Google Maps & Places APIs and PostGIS to support POI proximity queries (schools, hospitals, etc.), walking-time estimations, and region-based search.
- Architected a dual backend (Express REST API + serverless edge functions) with PostgreSQL, Kysely, Redis caching, and Supabase Storage for scalable property and image management, phyton for scripting.
- Built a modern React + TypeScript + Vite frontend with Tailwind/ShadcnUI and TanStack Query, featuring conversational search, real-time chat, advanced filters, favorites, and visit booking.
- Added multi-tier caching, batch parallel embedding generation, and performance logging, achieving sub-500ms vector queries and 70% reduction in repeated search computations.

Founder & Mobile AI Engineer — SugarSync *Remote*
Eir Labs LLC *Aug 2025 – Present*

- Leading the development of SugarSync, a cross-platform diabetes management ecosystem built with React Native, Expo, TypeScript, and Python for scripts.
- Implemented AI-powered food recognition using voice/vision input, integrating USDA and Edamam APIs for nutritional and carb-counting analysis.
- Designed secure patient–doctor data flows using Supabase, row-level security, and auth patterns similar to HIPAA requirements for medical data.
- Built predictive glucose trend models using Pinecone vector search, python and OpenAI embeddings to correlate meals, activity, and historical glucose logs.
- Architected the backend using Supabase Edge Functions, PostgreSQL, and serverless event pipelines for logging, recommendations, and user insights.
- Developed dashboards for clinicians to review histories, analyze patterns, and generate personalized care recommendations.

Mobile & AI Engineer *Toronto, Canada*
Spark n Co — Outsource *Aug 2024 – Jun 2025*

- Architected and delivered a React Native + Expo app integrated with Supabase and OpenAI LLMs with python, achieving a 95% model acceptance rate among 200 pilot users.
- Developed Supabase Edge Functions in Deno to process AI-generated data and optimized embeddings queries in Pinecone, reducing latency by 30%.
- Implemented GitHub Actions pipelines for build, test (Jest/Mocha), and deployment to AWS, increasing deployment frequency by 50% and test coverage.
- Led code reviews and mentored 2 junior developers on code quality, and best practices.

Teaching Assistant *Remote (Argentina)*

SoyHenry Bootcamp *Feb 2024 – Aug 2024*

- Pre-selected and trained 40+ assistant candidates in web technologies (React, Node.js) and soft skills, improving cohort readiness metrics.
- Conducted simulated coding interviews and workshops on JavaScript best practices, elevating student pass rates.

Software Engineer *Virginia, USA*

Bocancorp *Aug 2023 – Jan 2024*

- Designed and implemented dynamic Next.js pages with Zustand state management and Tailwind CSS.
- Built AWS-based microservices (Lambda, DynamoDB, S3) with Node.js, ensuring 99.9% uptime and auto-scalable architecture.
- Integrated CI/CD workflows using GitFlow and GitHub Actions.
- Proposed and implemented accessibility and performance improvements, decreasing first contentful paint (FCP).

TECHNICAL SKILLS

Languages & Frameworks: JavaScript (ES6+), TypeScript, Python, React Native, Expo, React, Next.js
Backend & Databases: Node.js, Deno, Bun, Express, Supabase, PostgreSQL, DynamoDB, MongoDB, Flask
AI & Data: Phyton, OpenAI APIs (GPT-4), Deepseek APIs, Claude APIs, Pinecone, ChromaDB, RAG architectures

PROJECTS

Onde — AI Real Estate Platform for Rabid Fish Labs 2025 – Ongoing

- Built a multi-index semantic and visual search engine using Pinecone (text + image embeddings) and OpenAI GPT-4o-mini for property discovery.
- Developed a Supabase Edge Functions "AI gateway" to orchestrate chat inference, filter extraction, RAG context building, and multi-routing logic.
- Integrated Google Maps & Places APIs and PostGIS for POI proximity search, walking-time calculations, and geospatial filtering.
- Architected a dual backend (Express REST API + serverless Deno functions) with Redis caching and automated embedding pipelines for images and documents.
- Delivered a React + TypeScript + Vite frontend with conversational search, real-time chat, advanced filters, and property-preview components.

SugarSync - Eir Labs LLC Ongoing

- Architecting a cross-platform diabetes management ecosystem with React Native, integrating USDA and Edamam API for carb counting and voice AI for ingredient recognition.
- Implemented secure data flows with Supabase and NextAuth, enabling doctor–patient record sharing while complying with HIPAA-equivalent standards.
- Utilizing Pinecone and OpenAI to generate predictive insights on glucose trends.

Rentscape Chat Feature — Spark n Co Jan 2025 – jun 2025

- Developed an AI-powered chat module in Next.js and React Native, leveraging OpenAI function calling and structured JSON outputs.
- Orchestrated RAG search with Pinecone and Supabase Edge Functions, improving property match relevance by 45%.
- Trained team on generative AI integration and prompt engineering, enabling 3x faster onboarding of new AI features.

Pursuit Mobile App — Spark n Co Aug 2024 – Jan 2025

- Led development of a React Native & Expo app generating personalized training/nutrition plans via OpenAI and Pinecone, increasing user retention by 30%.
- Created Supabase Edge Functions for embeddings creation, optimizing AI response times by 25%.

- Implemented end-to-end TypeScript workflows with Zod validation and Formik forms driven by JSON templates.

EDUCATION & CERTIFICATIONS

SoyHenry Bootcamp, Argentina *Jul 2023 – Sep 2023*
Fullstack Web Development

EDUCATION

National University of Córdoba, Argentina *2015-2018*
Software Engineering