

Alberto Monterroso Barco

Full-Stack Product Engineer

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Spain-based; available for substantial US-hours overlap and periodic US travel.

Summary

Full-stack product engineer with 5+ years of professional experience. I started Nimiq Pay and lead its development across mobile, web, and backend services, from product and UX decisions to production support. I also build developer platforms and data systems. I use AI coding agents regularly, with responsibility for architecture, testing, and the finished product.

Experience

Nimiq

Full-Stack Developer

Madrid, Spain / Remote

Current

- Started Nimiq Pay from scratch and led development from product and architecture decisions through launch and ongoing releases on iOS and Android. The self-custodial app supports NIM and USDT, BTC Lightning, NAKA card payments, Crypto Map, and embedded Mini Apps.
- Lead engineering across the Vue/Capacitor app, web catalog, payment integrations, and backend services. Contributed to transaction cosigning and payment issuer backends, plus a native integration for contactless card payments.
- Designed and built the Mini Apps platform: TypeScript SDK and provider, JSON-RPC routing, native host APIs, typed contracts and errors, package tooling, documentation, and compatibility tests. Embedded apps can access both Nimiq and EVM functionality. Automated submissions, catalog updates, and CI checks to reduce manual review and repeated contributor guidance.
- Built a validator reliability scoring system, from data synchronization and database migrations to APIs, statistical scoring, and the dashboard. Added stale-data indicators, bounded repair jobs, and shadow-mode checks before rollout. Validated with 193 automated tests, type checks, lint, and build checks.
- Improved Nimiq Wallet, Crypto Map, Hub, SDKs, and core infrastructure through mobile UX fixes, build tooling updates, and RPC/API changes.

Selected Projects

Nimiq Pay – product lead / full-stack engineer

2023–Present

- Took Nimiq's first native mobile payment product from concept to release on the App Store and Google Play. Continue to lead engineering across payments, self-custody, stablecoin support, native integrations, Mini Apps, reliability, and releases.

Nimiq Sunset Cyberspace – creator and full-stack maintainer

2020–Present

- Built and run a React Native app with **100K+ Google Play downloads** and a **4.2/5 rating from 1.8K+ reviews**. Stack: React 19, Expo, TypeScript, Three.js/WebGL, Firebase, Sentry, and Jest, with automated EAS releases and store submissions.
- Maintain the TypeScript/Express backend with Redis and MongoDB, covering authentication, App Check, analytics, rewards and payouts, caching, production monitoring, service-health checks, and retries.

EVM Mini Wallet – independent project

2026

- Built and deployed a mobile-first wallet for seven EVM networks, with automatic asset discovery, live prices, transaction history, QR/EIP-681 payments, and an accessible, responsive interface. Added RPC fallbacks and caching, and handled missing API data and rate limits.

Technical Skills

Languages: TypeScript, JavaScript, SQL, Rust (contributor-level); C#, Java, C/C++ exposure

Product / Frontend: React, React Native, Expo, Vue, Nuxt, Capacitor, native integrations, responsive UX, accessibility

Backend / Data: Node.js, Express, REST/JSON-RPC, SQL databases, Drizzle ORM, Cloudflare D1/SQLite, Redis, MongoDB

Platform / Quality: Cloudflare, Firebase, Sentry, GitHub Actions, CI/CD, Jest, Vitest, Bun test, package/SDK tooling

AI-assisted Engineering: OpenAI Codex, Claude Code, coding agents, implementation and verification from written specs

Education

Universidad de Alcalá

Bachelor's Degree in Telematics Engineering

Madrid, Spain

2016–2022