

Alex Shortov

Architect. Builder. Operator. One person.

End-to-End Software Engineer & Solutions Architect - the full software development cycle, 25 years

Clearwater, FL · alex@shortov.com · shortov.com · linkedin.com/in/shortov · github.com/shortov · English / Russian

One engineer for the full software development cycle: client conversation, product scope, architecture, infrastructure, front end, back end, testing, release and the years of operation after it. **25 years writing software (since 2001), 130+ projects** across payments, e-commerce, manufacturing, crypto, real estate, SaaS and AI; clients who stay 8 to 17 years. Fifteen years leading senior squads when a project needed more hands. Today Claude Code and a workshop of AI agents are the multiplier - **9,700+ commits across 74 repositories in the last 90 days**, with my review as the gate before anything ships.

EXPERIENCE

AEO Content, Inc.

2026 - present

CTO

First AI Engine Optimization platform: audits site visibility across ChatGPT, Claude, Perplexity and Google AI Overviews, then closes the gaps. TypeScript monorepo (four apps), containerized crawl and audit workers, Postgres, Stripe, MCP server, Chrome extension, WordPress plugin. Built end to end.

Data Subsystems, Inc.

2008 - present

Founder · Solutions Architect & Lead Developer

The consultancy behind most of the work here: 130+ projects for clients in payments, e-commerce, manufacturing, real estate, crypto and media; several stayed 8 to 17 years. I own the architecture and write the code; for fifteen years also hired and led delivery squads across 10+ concurrent clients.

SeamlessChex / Paynote

2017 - 2025

Engineering Manager, Payments Platform

- Took over a prototype stalled after two years of outside development and re-architected it on AWS in six months; stayed the exclusive engineering partner for the following eight years.
- Owned bank connectivity end to end - Plaid, Dwolla, NMI, billing flows, merchant onboarding and risk state - and built the external partner API (v1/v2) that let other platforms embed Paynote payments, plus a Cypress end-to-end suite and infrastructure-as-code.

AdPal

2023 - 2025

Platform Engineer → CTO

AI chatbot and lifecycle-engagement platform for B2B SaaS and fintech clients: multi-tenant RAG, vector search, OAuth-connected CRM and ad-platform pipelines, voice and Telegram channels. Its AI-search experiments became the AEO Content architecture.

SINGER22 → 22sGems

2010 - 2025

Platform Engineer → Migration Engineer → Systems Integration Lead

Custom e-commerce platform for a 10,000+ SKU fashion retailer, then a full Shopify migration with SEO equity preserved. When that chapter closed, helped the same owner relaunch as a fine-mineral brand with an AI-narrated video catalogue that publishes itself.

Electro-Mech Scoreboard Company

2008 - 2025

Web Platform → CRM & Content → Growth Systems Engineer

Seventeen years with one B2B manufacturer: from a static site to a content, CRM and funnel platform with quote and configurator flows, then an AI-visibility program that moved the score from 33 to 90.

EARLIER

Seamless Payments - Payments Platform Engineer, 2014 - 2021. Transaction, dispute and risk events turned into merchant-facing communication.

Tampa4U Realty - Platform Engineer, 2008 - 2022. Real-estate search on MLS feeds: thousands of programmatic pages wired into an in-house CRM and email automation.

Inframark (2021 - 2022) - customer portals for a national water-infrastructure operator;

Veji Holdings (2020 - 2022) - multi-vendor US/Canada marketplace, vendor onboarding, localized catalogs.

Nutraline Distributors - Web Developer, 2002 - 2008: web development, digital marketing and e-commerce operations for a distributor. **Matrix Technology Group** - Software Developer, 2001 - 2002: development and QA for marketing software.

LANGUAGES & FRAMEWORKS

TypeScript, JavaScript, Python, PHP, SQL, C# / .NET, Elixir, Go, Structured Text (PLC). Node.js, NestJS, Next.js, Fastify, React, Angular, Astro, Tailwind.

PAYMENTS & FINTECH

Plaid (Link, link tokens, update mode, instant and micro-deposit verification), Dwolla funding sources and ACH, NMI card gateway, Stripe, digital checks, merchant onboarding, risk state, invoicing, recurring billing, hosted billing and checkout links.

E-COMMERCE

Shopify (Admin API, 10k+ SKU migrations, Liquid), Magento, custom PHP/JS storefronts, POS integration, Google Merchant Center and feeds, multi-vendor marketplaces.

INDUSTRIAL

Quote and configurator flows, parts search over catalogs, operator consoles for machinery, PLC / Structured Text, industrial HMI migration.

CRYPTO & WEB3

DeFi protocol interfaces, NFT marketplaces, wallet and DeFi integrations, ethers.js, web3.js, on-chain indexing (Subgraph, Substreams), node deployment and operation (consensus + execution), AWS ECS / Lambda / MSK.

DATA & INTEGRATIONS

Provider OAuth (Google, Shopify, CRMs, ad platforms), NextAuth, token rotation, webhooks, CRM integrations (HubSpot and others), Playwright, Puppeteer, Cheerio, private GraphQL capture, adaptive rate limiting, anti-bot handling, dedup and provenance, source health monitoring.

APIS & SDKS

Versioned REST (v1/v2), OpenAPI and hosted docs, API keys and Bearer auth, per-app audit logging, GraphQL, reference clients, MCP servers, Chrome extensions, WordPress plugins, embeddable widgets.

THE FULL CYCLE, ONE ENGINEER

- **Client and product owner.** The first conversation, scope on one page, what not to build, weekly demos with numbers. No one between the client and the code.
- **Solutions architect.** System design, data model, integration boundaries, build-versus-buy - for payment rails, marketplaces, industrial systems, DeFi protocols and AI pipelines.
- **Infrastructure architect.** AWS, Cloudflare, Docker, Terraform, CI/CD, on-prem and hybrid; the cloud bill is a design input, not a month-end surprise.
- **Full-stack developer.** Front end, back end, APIs, databases, workers, extensions, plugins - TypeScript, Python, PHP, SQL and whatever the legacy speaks.
- **QA engineer.** Cypress and Playwright end-to-end suites, unit tests as a release gate, load and regression runs before every release.
- **Team lead, when needed.** Hired and kept senior squads for 15 years, ran up to 10 client engagements in parallel; the same gates now run with AI agents alongside me. For jobs bigger than one person, a vetted team from 25 years of industry contacts is up in days.

INDUSTRIES

- **Payments and fintech.** Eight years as the exclusive engineering partner of an ACH and digital-check platform: Plaid Link and bank verification, Dwolla transfers, NMI card gateway, Stripe, merchant onboarding and risk state, a versioned partner API other platforms embed. Regulated money movement under live traffic.
- **E-commerce and marketplaces.** A custom platform for a 10,000-SKU fashion retailer (15 years) and its full Shopify migration with SEO equity intact; a multi-vendor US/Canada marketplace; Magento and POS integrations; storefronts for beauty, wine and grocery brands.
- **Manufacturing and industrial.** Seventeen years with a scoreboard manufacturer: quote and configurator flows on a content and CRM platform; a parts-search engine over industrial catalogs, an operator console for machinery, controller code for factory machines (PLC, Structured Text).
- **Crypto and Web3.** Product engineering for DeFi protocols - liquid staking, governance-incentive marketplaces, tokenized yield, NFT lending - and a web3 security firm: Next.js with ethers.js and web3.js, wallet integrations, Subgraph and Substreams indexing, node operation on AWS.
- **Real estate.** A search platform on MLS feeds that ran fourteen years: thousands of programmatic pages, an in-house CRM and email automation, organic traffic as the growth channel.
- **SaaS and AI products.** The first AI Engine Optimization platform, built end to end; a multi-tenant AI chatbot and voice platform; Telegram bots and mini-apps; Claude and OpenAI in production, RAG over company data.
- **Digital marketing, SEO and AEO.** Programmatic SEO, Google Ads and analytics wired into CRMs, per-client tracking scripts on a CDN, an AI-visibility program that moved a manufacturer's score from 33 to 90, migrations off WordPress and Webflow onto static stacks.
- **Media and streaming.** Three properties for one film business, with a streaming platform on an AWS backend and an admin portal for content and users.

ENGINEERING DEPTH

- **Plaid and bank rails in production:** link tokens, update mode and re-authentication, instant and micro-deposit verification; Dwolla funding sources and ACH; fee, invoice and hosted billing-link flows.
- **OAuth and connected accounts:** Google, Shopify, CRM and ad-platform connections across multi-tenant products - consent flows, refresh-token rotation, per-tenant credentials, re-auth paths.
- **Scraping and private APIs:** a real-time market-data recorder for a marketplace with no public API - captured GraphQL, authenticated sessions, adaptive rate limiting, anti-bot handling, hundreds of concurrent live streams, evidence behind every fact; collector fleets over SEC EDGAR, CourtListener, SAM.gov and MLS.
- **APIs and SDKs I build:** a versioned partner API (v1/v2) with API-key auth, per-app audit log and OpenAPI docs; a public API with hosted docs and a reference client; MCP server, Chrome extension, WordPress plugin in the official directory.
- **User-facing components:** bank-connect flow, hosted checkout and billing links, per-client tracker scripts, embeddable chat widgets and mini-apps.
- **Legacy rescue:** PHP, .NET, Elixir, Go, WordPress plugins, discontinued industrial HMLs. SeamlessChex started as a stalled prototype and stayed eight years.

CLOUD & INFRASTRUCTURE

AWS (Lambda, S3, CloudFront, RDS, ECS), Cloudflare Workers and Pages, Docker, Terraform, GitHub Actions, Vercel, Modal, PostgreSQL, Redis, Kafka, ClickHouse, vector search, Linux, on-prem and hybrid, cloud cost control.

AI

Claude and OpenAI in production, RAG pipelines, voice agents (OpenAI Realtime, ElevenLabs), document extraction at batch scale, MCP, agent orchestration with Claude Code.

MARKETING, SEO & AEO

Programmatic and technical SEO, Core Web Vitals, AI Engine Optimization, Google Ads, analytics and tracking, CRM funnels, email automation.

MANAGEMENT

Hiring and keeping senior engineers, 10+ parallel engagements, code review as the release gate, weekly releases, scope and roadmap ownership, direct client communication, documentation and handoff.

SELECTED CLIENTS

Fintech: SeamlessChex, SeamlessPay.
Crypto & DeFi: Infrared Finance, Dinero, Hidden Hand, Pirex, Astaria, Resonance Security.
Enterprise & industrial: Innometrix, Electro-Mech, Ultrasonic Technologies, Inframark.
E-commerce: SINGER22 / 22sGems, Vejii, Vegan Essentials, RevitaLash, Lieber Fine Wines.
Media & data: Cinema Playhouse TLV, MarkosWeb, VirusWeather (WordPress.org).
Real estate: Tampa4U, Tampa MLS.

REFERENCES

"Alex is an exceptional team lead whom I trust implicitly. I would highly recommend."

Evan Albert, CEO & Co-Founder, Paynote & SeamlessChex (LinkedIn, 2022)

"Passionate company with thorough knowledge in software engineering from inside and out, as well profound understanding of Google Ads...."

Jon Singer, CEO/Founder, SINGER22 - now 22sGems (LinkedIn, 2022)