



Andrew T. Carl

Lead Software Engineer | Application Architect | C#/.NET | SaaS | Applied AI Products

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REMOTE OPPORTUNITIES | FRACTIONAL OR FULL-TIME | PRODUCT, PLATFORM, MODERNIZATION, AND AI

WHAT I BUILD

I am a Lead Software Engineer and Application Architect with 17+ years of experience building technical software for complex business problems. **I build products on top of LLM APIs**, modernize C#/.NET platforms, and lead projects from early architecture through launch and support. My background includes engineering software, SaaS, payments, analytics, distributed systems, and simulation.

FOCUS C#/.NET modernization | SaaS & payments | LLM API product engineering | application architecture | technical leadership

SELECTED EXPERIENCE

Co-Founder & Lead Software Engineer | Re3 Studios | Mar 2021-Present

Satus Colony Survival | Majority owner | Full-time Mar 2021-May 2022 and Mar 2026-Present; part-time during external roles

I co-founded Re3 Studios to turn years of hobbyist game development work into a commercial game. I now lead the architecture, engineering, marketing and release strategy for Satus Colony Survival. I took the project from my first full-time push in 2021 through a public Creative Alpha and am preparing it for Windows Early Access.

PRODUCT re3studios.com/alpha | store.steampowered.com/app/1715630/Satus_Colony_Survival/

- **I currently lead the architecture and releases for a large Unity/C# game** with 550,000+ lines of C# across 2,200+ files, and roughly 2,800 automated tests.
- **I separated the client, server, and shared simulation code** into distinct Unity assemblies with clear compile-time boundaries, server authority, and persistent world state.
- **I developed the simulation systems that drive the colonists** including needs, work scheduling, navigation, farming, hauling, resource gathering, animation, recovery, and interaction with a changing world.
- **I created in-game content tools** for terrain, structures, nature, entities, reusable blueprints, data-driven content, and Steam Workshop support.
- **I built the production and release tooling** for diagnostics, error reporting, build validation, Steam packaging, release profiles, telemetry, and player feedback.
- **I built a three-lane Unity validation pipeline** that lets up to eight AI coding agents work in parallel, moving 200-300 scoped tasks per week and raising weekly merged PRs from about 40 to 60-70+.

Lead Software Engineer | Goodfynd | Aug 2024-Feb 2026

SaaS platform, payments, analytics, and applied AI product delivery | Details continue on the next page

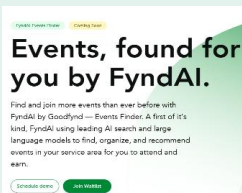
I joined a six-engineer product team to take ownership of Goodfynd's backend and modernize it. My role grew into monetization, analytics, and product direction. I also created the company's first AI product while continuing to support the SaaS, POS, events, and payment systems that generated revenue.

PROFESSIONAL EXPERIENCE - CONTINUED

Lead Software Engineer (continued) | Goodfynd | Aug 2024-Feb 2026

SaaS platform, payments, analytics, and applied AI product delivery | Continued

- **I created and launched FyndAI Leads, Goodfynd's first AI product.** It converted about 100 beta signups into 15 paid trials and grew to 35+ seats within five months.
- **I owned Goodfynd's backend and redesigned the V3 API** for the consumer, vendor, POS, events, and admin products, cutting repeated database calls and controller boilerplate.
- **I built a Gemini/OpenAI data pipeline** that processed around 100,000 vendor profiles and produced 30,000+ verified email contacts, including search, cleanup, duplicate removal, URL checks, and safety filters.
- **I moved the platform to a new fee model without downtime** across roughly \$1M in annual payment volume, covering POS, online ordering, invoices, ACH, cards, cash, tax, tips, and local fees.
- **I analyzed several years of vendor GMV and retention data**, corrected assumptions about churn, and helped shift the roadmap toward simpler recurring SaaS products. The resulting roadmap shift increased average monthly revenue per vendor from under \$10 to over \$25.



FEATURED PRODUCT | FYNDAI LEADS

I built this local-event discovery and lead-generation product on top of Gemini and OpenAI APIs, with multiple passes for extraction, cleanup, duplicate removal, validation, and production processing. This includes unique searches and data extraction for food trucks, caterers and general merchants.

100 beta signups -> 35+ seats in five months | 40,000 events discovered

Chief Technology Officer - Full-time Contract | Funtoken | Apr 2024-Aug 2024

Gaming product and platform engagement

The CEO brought me in to turn the project around. I assessed the codebase, rebuilt the team, launched the public site, and pitched a new GameHub direction. The engagement ended when the founders chose to refocus on existing products.

- **I launched a new public Next.js website within weeks** with responsive design, animations, blog API integration, automatic WebP conversion, sitemap generation, and analytics.
- **I rebuilt the engineering team** after reviewing 64 applicants and conducting 15 interviews. I hired two senior full-stack engineers with complementary skills.
- **I audited the repositories and bridge rollback risks**, analyzed token-holder behavior, and led two investigations that traced cross-chain transactions to KYC exchanges.
- **I created and pitched a new Web3 GameHub direction** covering the product architecture, user experience, monetization, staffing, and delivery plan.

Web Developer Lead | BlueModus | Sep 2023-Apr 2024

Enterprise C#/.NET CMS, search, integration, and email delivery | Details continue on the next page

I joined BlueModus as a general agency developer to broaden my .NET and web experience after transitioning from mechanical engineering into software. I worked across enterprise CMS, search, integrations, and email marketing, earned Kentico certification, and fixed a slow NetForum-to-Kentico data sync.

PROFESSIONAL EXPERIENCE - CONTINUED

Web Developer Lead (continued) | BlueModus | Sep 2023-Apr 2024

Enterprise C#/.NET CMS, search, integration, and email delivery | Continued

- I earned the **Kentico Xperience 13 developer certification in 2.5 weeks** and later added the marketing certification while delivering C#/.NET work for agency clients.
- I **cut a NetForum-to-Kentico data sync from hours to minutes** and improved the freshness and relevance of the Azure Cognitive Search results that depended on it.
- I **built dynamic MJML email templates** with Kentico personalization macros and cross-client testing so they rendered consistently.



KENTICO XPERIENCE 13 | DEVELOPER + MARKETING CERTIFIED

I earned the developer credential within 2.5 weeks of joining BlueModus and later added the marketing certification.

Enterprise CMS delivery | Azure Cognitive Search | NetForum integration | MJML personalization

Principal Software Engineer - Full-time Contract | Glitter Finance | May 2022-Aug 2023

Distributed systems, SDKs, transaction infrastructure, and technical leadership

I joined Glitter Finance to build the engineering team and the transaction infrastructure behind its products. I recruited and managed a global team while staying hands-on with the SDK, monitoring, recovery, bridge, and early lending work across multiple networks.

- I **recruited 10 software engineers over the course of the engagement** after reviewing 220+ candidates and conducting 60 interviews. I directly managed six to seven engineers at a time across four products.
- I **designed transaction services that worked across multiple networks** including Algorand TEAL contracts, Node.js bridge services, and a USDC rollout across eight blockchains.
- I **built the main JavaScript SDK and real-time monitoring system** for ten networks, including PostgreSQL recovery, RPC polling, and transaction APIs.
- I **built a single bridge explorer for three different bridge implementations** so users could see transactions, volume, status, and estimated completion time in one place.
- I **helped design the Luster lending and borrowing prototype** including yield optimization, installment-based borrowing, and stable-token economic modeling.

Independent Software Engineering & Consulting | Selected Engagements | Mar 2021-May 2022

Concurrent client work while developing Re3 Studios products

I took on focused client work while building Re3 Studios. I continued supporting Evapco's software platform and provided smart-contract risk analysis for Doxxlocker.

- I **continued supporting Evapco's engineering and sales software** through May 2022 while I was also developing Re3 Studios products.
- I **analyzed around 100,000 BNB Chain contracts for Doxxlocker** and used the results to support blockchain security investigation reports from Aug 2021-Mar 2022.

Thermal Software Engineer | Evapco-Evaptech | Dec 2008-Mar 2021

Engineering software, simulation, modernization, and R&D | Contract support through May 2022

I started at Evapco as a mechanical engineer and gradually took ownership of the engineering software platform. I turned thermal and acoustic R&D into tools used by engineering, application engineering, sales, and marketing. Those tools removed a major bottleneck while helping protect the performance guarantees attached to equipment selections.

- **I rebuilt an Excel/VBA engineering tool as a .NET WPF platform** backed by Azure Functions and SQL Server. It let application engineering, sales, and marketing create validated equipment selections and test design changes without sending every request through engineering.
- **I developed and calibrated thermal-performance models against controlled tests.** We had a maximum 3% error allowance and often needed to work tighter than that because the results supported contractual performance guarantees.
- **I built acoustic-prediction tools** that modeled sound paths, environmental effects, configurable components, and a dynamic 3D view of cooling-tower behavior.
- **I supported heat-transfer and sound-reduction R&D** by turning test-cell data into engineering models, product improvements, and production software rules.
- **I wrote a 90-page engineering design guide** and co-authored two technical papers for the Cooling Tower Institute.

WHERE I ADD VALUE

C#/.NET MODERNIZATION

I modernize legacy VBA, VB.NET, WPF, and C# systems without losing the domain knowledge that makes them valuable.

APPLIED AI PRODUCTS

I build products on top of LLM APIs and stay involved through data quality, cost control, validation, and production support.

PRODUCT + PLATFORM

I own SaaS APIs, payments, migrations, analytics, integrations, reliability, and incident response.

ARCHITECTURE + LEADERSHIP

I design stateful systems, make practical architecture tradeoffs, hire engineers, and lead distributed delivery.

TECHNICAL DEPTH

C# + .NET

C#, .NET, ASP.NET, WPF, Unity, application and solution architecture, stateful systems, VB.NET/VBA modernization

AI + DATA

OpenAI | Gemini | xAI | Claude; structured extraction, batching and cost controls, validation and safety; MongoDB, SQL Server, PostgreSQL, analytics

PLATFORM + WEB

REST/OpenAPI, Stripe, Azure, AWS, Cloudflare, GitHub Actions, Docker, PowerShell, TypeScript, Node.js, Express, React, Next.js, Jest, Postman, Bugsnag

DELIVERY + PRODUCT

Git/GitHub, diagnostics, integration testing, CI/CD, zero-downtime migrations, incident response, technical hiring, product analytics, roadmap strategy

EDUCATION + PUBLICATIONS

EDUCATION B.S., Mechanical Engineering, University of Maryland, Baltimore County, 2008 | GPA: 3.978/4.0

PUBLICATIONS Cooling Equipment Sound Measurements: Test Code Comparisons and Recommendations (CTI Journal, 2019)

atcweb3.com/documents/2019WinterJournalExcerpt.pdf

Hybrid Cooling Towers Water Savings Calculations and Measurements (CTI Journal, 2015)

atcweb3.com/documents/2015SummerJournalExcerpt.pdf