

Principal Engineer

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SUMMARY

I make the calls others escalate — and write down why. Decisions made: 50+ architecture calls across a 289-endpoint migration serving 53 markets. 3 escalated. \$336K+ savings validated by finance.

Strategy: Technical Strategy, Architecture Vision, Roadmap Planning, Build vs Buy, Risk Management, Investment Justification

Architecture: Domain Architecture, Microservices, Event-Driven, Multi-Agent AI, Legacy Modernization

Execution: Cross-Org Alignment, Executive Communication, Technical Decisions

PROFESSIONAL EXPERIENCE

Creator & Lead Engineer, The Real Work (TRW) Framework | Salt Lake City, Utah

Jan 2026 – Present

Tech Stack: TypeScript, Python, MCP, Multi-Agent Systems, YAML, CLI Tooling, Claude Code, VS Code, Vitest, pytest

- Designed framework architecture with 6-phase execution lifecycle, quality gates, and 19 MCP tools. Made architectural decisions for multi-agent coordination, persistent memory, and cross-platform integration.
- Built multi-agent team coordination with specialized roles (lead, implementer, tester, reviewer) and file ownership validation. 2,600+ tests with automated verification.
- Launched beta across 5 coding platforms. Architecture decisions documented as the framework methodology itself. Standards that survive because they're built into the system.

Staff Software Engineer | AI Systems Architect, Ucity International | Provo, Utah

Jan 2025 – Jan 2026

Tech Stack: GenAI, LLMs, TypeScript, Python, AST Parsing, PHP, AWS, Kubernetes, GitHub Actions, CI/CD, Context Engineering, MCP

- **Decision Ownership:** Made 50+ architectural calls autonomously during 289-endpoint migration, escalating only the 3 decisions with multi-year organizational impact. Leadership trusted the judgment.
- **Dispute Arbitration:** When teams disagreed on migration approach (big-bang vs. strangler fig), evaluated trade-offs, committed to phased strangler pattern. Result: zero major incidents, 96% traffic migrated.
- **Digital Archeology:** When source code didn't exist, found another way. Reverse-engineered Acucobol via bytecode analysis, producing 45+ migration specs (50K+ lines).

Engineering Manager / Technical Lead, Ucity International | Provo, Utah

Nov 2023 – Jan 2025

Tech Stack: Redis, Datadog, LaunchDarkly, PHP, Laravel, Docker, AWS, CI/CD, TravisCI, BPF

- Led migration of 289 API endpoints achieving 96% production traffic on Laravel, delivering 34% faster response times and 4x order processing improvement (300 to 1,300 orders/5min).
- Achieved \$336K annualized savings (FinOps tags + invoices): cloud infrastructure (\$278K), DataDog optimization 62.5% (\$12K to \$4.5K/month), RDS consolidation (\$32K). Removed 500,000 lines legacy code.
- **Built production observability infrastructure:** implemented on-call rotations, automated alerting, monitoring dashboards, and a real-time debugging toolkit (Redis/Xdebug/BPF) reducing MTTR by 95% (incident logs, 90-day window).
- Diagnosed Redis pooling issue achieving 95% DNS resolution improvement and 97-98% OTP auth improvement.
- **Mentored 10+ engineers through 185+ 1:** 1 sessions with career frameworks and growth records. CTO recognition: 'Tyler is AI' for innovation leadership. Built the kind of team where people stayed through hard projects — zero attrition during the entire 289-endpoint migration.
- Led first load test in company history—5 sessions, zero system failures, 85-90% confidence for peak traffic. Attended every strategic meeting throughout tenure.

Principal Engineer, ButcherBox | Remote

Feb 2022 – Oct 2023

Tech Stack: OpenAI GPT-3, React, TypeScript, Node.js, Azure, Kubernetes, CI/CD, GitHub Actions, Shopify, Instacart

- **Platform Strategy:** Shaped 4-year technical roadmap for \$2B+ transaction platform, advising executive leadership on build-vs-buy decisions and architectural investments.
- **Executive Partnership:** Provided strategic technical guidance across Operations, Customer Service, and Engineering, influencing product roadmaps and risk mitigation strategies.
- **Innovation Leadership:** Pushed GPT-3 adoption (2022, pre-ChatGPT) before anyone was asking for it. Built the ROI case that freed AI tooling budget across the organization.
- **Flagship Execution:** Single-handedly led and delivered the Instacart integration—ButcherBox's most visible partnership—owning architectural design, cross-team coordination, and executive visibility end-to-end over 6 months.

Senior Lead Software Engineer, ButcherBox | Boston, Massachusetts

Jul 2019 – Feb 2022

Tech Stack: Kubernetes, Helm, Docker, Event-Driven Arch, Microservices, Azure, TypeScript, CI/CD, GitHub Actions, Zendesk

- Built Operations engineering team from 0 (solo) to 9 engineers, then broke it into specialized squads: Operations backend, CS Support (Zendesk dashboard app), and backend API migration team.
- Transitioned to lead all 3 teams simultaneously—12 engineers total across Operations, CS Support, and API migration—with clear ownership and delivery accountability.
- Engineered backend optimizations handling 10x traffic surge during COVID with zero scaling incidents, while competitors experienced significant downtime.

Principal Engineer, Janeiro Digital | Boston, Massachusetts

Jan 2019 – Apr 2019

Tech Stack: Solid Protocol, React, Node.js, Decentralized Web

- Rescued failing insurance platform 6 months behind schedule by restructuring architecture and coordinating 6-8 remote developers—delivered on-time with zero regulatory compliance issues.
- Delivered real-time quoting engine handling complex state-specific regulations for all 50 states, processing quotes in under 2 seconds across 200+ rule variations.
- Kept the client in the loop with weekly demos. The team was remote and under pressure, but we shipped on time every week.

VP of Engineering & Lead Systems Architect (Founder), O2O HQ | O2O Global Marketplace | American Fork, Utah

Jun 2015 – Nov 2018

Tech Stack: AWS, Aliyun, PHP, Rest API, Fintech

- **Technical Co-founder:** Defined architecture vision for international e-commerce platform spanning AWS (US) and Aliyun (China), solving 'Great Firewall' latency at scale.
- **Strategic Partnerships:** Negotiated and architected integrations with 19+ payment gateways including ICBC (world's second-largest bank). No payment infrastructure, no transaction volume.

Founder & Principal Solutions Architect, Antic Solutions | Springville, Utah

Jan 2013 – Jun 2017

Tech Stack: Node.js, Angular, PHP, E-commerce

- Secured and executed multiple NewBalance.com contracts, directing performance engineering that improved page load times 40% and increased conversion rates measurably.
- Operated as Fractional CTO for 5+ enterprise clients simultaneously, managing end-to-end SDLC and establishing engineering standards that outlasted engagements.

Senior Software Engineer & Team Lead, Modernized Media | Draper, Utah

2014 – 2015

Tech Stack: Marketplace APIs, Automation, SQL

- Led development of multi-channel sales automation achieving +1,700% YOY sales and -44% overhead reduction (shipping -44%, labor -17%) within 1 month of deployment.
- Designed centralized inventory orchestration engine integrating Amazon, Overstock, NewEgg, and 6+ additional marketplaces into unified platform.

EDUCATION

Computer Software Engineering — Coursework (147 of 126 credits, degree not conferred)

2010 - 2013

Utah Valley University

Did Not Graduate

Associate's Degree, Pre-Professional Associate in Science

2007 - 2009

Utah Valley University

Degree Earned

PATENTS

Optimized Caching and Updating of Custom Assets RSS Algorithm (2012)

Process Patent for a native asset caching system that significantly improved load speeds across fragmented mobile platforms.

HONORS & AWARDS

Eagle Scout + 3 palms | New Century Scholarship | Dean's List