Tyler Wall

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SUMMARY

Staff Systems Architect who builds AI systems that compound. Every tool I ship is adopted voluntarily — if engineers aren't choosing it, I built the wrong thing.

Core Skills: AI Systems Architecture, Agentic Platforms, Legacy Modernization, Model Context Protocol (MCP), Platform Engineering, Developer Experience (DevEx)

Tech Stack: Generative AI, Kubernetes, AWS, React, TypeScript, Node.js, PHP, Angular

Practices: DORA Metrics, Strangler Fig Pattern, Event-Driven Architecture, Microservices, CI/CD, Agile/Scrum

EXPERIENCE

Staff Software Engineer | AI Systems Architect, Unicity 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

- Built multi-agent AI migration system with 5 specialized sub-agents, reducing endpoint migration time from hours to under 10 minutes—enabled 289 endpoint migrations at unprecedented velocity.
- Reverse-engineered legacy compiled Acucobol systems without source access, producing 45+ migration specifications (1.75MB/50,000+ lines) through AI-assisted bytecode analysis with 99%+ query accuracy.
- Orchestrated 34 parallel AI agents for migration validation framework, achieving 90% error reduction in schema mapping (validation suite, before/after comparison).
- Designed Truth Source Architecture enabling AI agents to consume documentation and refactor code without hallucination—patterns now adopted organization-wide.
- Built AI sprint intelligence system using historical transcripts as knowledge base—benchmarked against human estimates at +/-1 story point (blind comparison, 6 sprints), achieving 2.5x throughput (story points over 6 sprints) and 13% sprint efficiency gain.
- Designed AI governance framework—read-only agent accounts, DevOps approval workflows, failure-as-state design principles—after identifying blast radius from an unscoped agent action.

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

- Led teams processing $2B+ in transactions while scaling platform architecture 100x over four years, handling 50% month-over-month order volume spikes.
- Pioneered GPT-3 implementation (2022, pre-ChatGPT) automating support workflows and saving ~2 hours/week/employee with NPS of 57—one of earliest enterprise GPT deployments.
- Single-handedly led and delivered Instacart integration—company's flagship partnership initiative—owning architectural design, cross-team coordination, and executive visibility end-to-end.
- Spearheaded migration and integration to Shopify, prototyping the approach and driving adoption across engineering and operations teams.
- Architected environment-agnostic test data seeding framework, accelerating CI/CD pipeline velocity by 3x through configurable scenario generation.
- Transitioned proof-of-concept customer support platform (Zendesk dashboard app) into production-grade React application serving 12-person operations team.

Engineering Manager / Technical Lead, Unicity International | Provo, Utah   Nov 2023 – Jan 2026
Tech Stack: Redis, Datadog, LaunchDarkly, PHP, Laravel, Docker, AWS, CI/CD, TravisCI, BPF

- **Platform ROI:** Delivered $336K+ annual savings (cloud $278K, DataDog 62.5% reduction, RDS $32K) while improving reliability—34% faster response times, 4x order processing capacity.
- **Debugging Platform:** Built real-time debugging tools (Redis/Xdebug/BPF) reducing MTTR 95%. Engineers resolve issues in minutes. Adopted organically across 5 teams.
- **Developer Metrics:** Built 50 per-developer daily/weekly reports. Support overhead dropped from 25% to <5% through data-driven tooling, not top-down directives.

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

- **Team Builder:** Built Operations engineering from 0 (solo) to 9 engineers across 3 specialized squads. Platform recognized internally as the benchmark for Testing, Stability, and Innovation.
- **COVID Resilience:** Engineered backend optimizations handling 10x traffic surge during COVID with zero scaling incidents while competitors experienced significant downtime.
- **Immediate Impact:** Boosted application performance 87% in the first 90 days. Earned the right to propose bigger changes.

VP of Engineering & Lead Systems Architect (Founder), O2O HQ | O2O Global   **Jun 2015 – Nov 2018**
Marketplace | American Fork, Utah
Tech Stack: AWS, Aliyun, PHP, Rest API, Fintech

- Designed distributed architecture spanning AWS (US) and Aliyun (China), solving 'Great Firewall' latency and enabling seamless cross-border e-commerce.
- Architected unified logistics engine integrating 8+ international providers, automating bonded/free-trade import logic across 3 countries.

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.
- Coordinated blended remote/on-site team under pressure, maintaining stakeholder confidence through transparent communication and consistent weekly delivery milestones.

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   2010 - 2013
Utah Valley University

Associate's Degree, Pre-Professional Associate in Science   2007 - 2009
Utah Valley University

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