

Tyler Caldwell

Engineering Leader & Software Architect

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Professional Summary

Senior Staff Engineer and Architect with over a decade of experience delivering scalable web systems in Fintech and E-Commerce. Proven track record of driving multi-million dollar cost efficiencies and accelerating organizational productivity through high-impact architecture initiatives. Expert in technical strategy, predictable agile delivery, and domain-driven design.

Experience

KOHO | Senior Staff Developer 2023 – Present

Leading technical strategy for core banking platforms, AI adoption, and infrastructure resilience.

- **AI Developer Enablement:** Designed and deployed an enterprise-wide AI coding toolset.
 - Drove a **+17% increase in weekly PR throughput** per developer (+88% gross code changes YoY).
 - Achieved **91% developer satisfaction** for AI development tools.
 - Contributed to a company-wide **8x increase in revenue per employee** since 2022, with 40% of the gains in 2025 alone, a difference attributed directly to AI acceleration.
- **Cost Efficiency & Vendor Optimization:** Achieved **98% cost reduction** on a critical realtime fraud detection service by leading technical migration from legacy vendor product (\$1.5M/yr) to a custom Sagemaker solution (\$26K/yr).
- **Payments Stability & Resilience:** Engineered high-impact solutions to stabilize critical payment flows.
 - **Reduced reliance on fallback stale balance checks by 94%** (1,500/day → 90/day) by resolving critical throttling issues, ensuring authorizations execute against the realtime internal ledger.
 - **Improved p99 latency by 83%** (250ms → 40ms) for card authorizations.
 - Implemented a **multi-region failover strategy** and migrated critical services to Aurora Global DB, enabling a **70% reduction** in redundant cross-region backups.
- **ML Architecture:** Established the organization's MLOps "golden path" for realtime inference and led the deployment of the company's first realtime inference Machine Learning model.
- **Core Banking Integration & Strategy:** Led the technical integration with the new core banking platform, a critical milestone in the company's roadmap to become a licensed bank. Supported regulatory compliance, enabled deposit account migration, and powered the launch of a Pay Later loan product which scaled to 10% of active users.
- **Architecture & Governance:** Pioneered a service tiering framework with standardized SLOs/SLAs. Drove coverage from zero to **100+ SLOs**, maintaining a steady state of zero breaches.
- **Pioneered Engineering Governance & Developer Experience:** Drove the adoption of a unified platform (Backstage) for onboarding and technical standards definition (Soundcheck), enabling the automatic measurement of compliance and empowering teams to execute targeted campaigns.

Wayfair | Staff Software Engineer 2020 – 2023 (Previously: Senior SWE (2018–2020), SWE II (2017–2018), SWE I (2016–2017))

Grew from entry-level engineer to Staff-level leader, managing technical strategy for SEO and Core Shopping Funnels.

- **Technical Strategy:** Architected and led delivery of the SEO Platform, a critical solution for the Core Shopping Funnel that **powered an \$800M marketing funnel** and directly improved organic search ranking and clickthrough rate.
 - **Team Leadership & Growth:** Led a team of **10+ engineers**, successfully mentoring ICs into Tech Leads and Managers. Directed hiring decisions for hundreds of candidates ranging from junior engineers to Directors.
 - **Microservices Architecture:** Applied Domain-Driven Design (DDD) to decompose legacy systems into scalable microservices using **Streaming, REST, GraphQL, CQRS, and Event Sourcing**.
 - **Process Engineering:** Reduced delivery risk by implementing empirical processes that improved the visibility and predictability of roadmaps. Established measurable quality gates throughout the SDLC.
 - **Cross-Functional Collaboration:** Partnered directly with Product, Marketing, Design, BI, and Web Analytics leaders to translate business goals into technical roadmaps.
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Technical Skills

Languages: Java, Spring Boot, Go, PHP, Node.js, SQL, JavaScript, React.js, HTML/CSS, Mustache

Cloud & Infrastructure: Amazon Web Services (AWS), Terraform, Helm

Architecture: Microservices, Event-Driven Architecture, Domain-Driven Design (DDD), MLOps

Education

Boston University - MS Software Development | 2017 - 2019

UMass Amherst - BA Computer Science + BA Economics, Minor Political Science | 2012 - 2016

Certifications

AWS Certified Solutions Architect - Associate (2024)

AWS Certified Developer - Associate (2024)

AWS Certified Data Engineer - Associate (2025)

AWS Certified Machine Learning Engineer - Associate (2025)

AWS SysOps Administrator - Associate (2025)

AWS Security - Specialty (2025)

Awards

Annual Company Values Award - Craft | KOHO

Commonwealth Honors Scholar with Greatest Distinction | UMass Amherst