

JASON KING

Distinguished Software Engineer | Platform Architecture & Technical Leadership

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PROFESSIONAL SUMMARY

Distinguished technologist with 30 years architecting scalable platforms and 15+ years driving technical strategy across organizations. Proven track record translating business priorities into architectural solutions that enable enterprise scale, developer velocity, and operational excellence. Deep expertise in platform services including payments, billing, identity, and APIs with hands-on leadership across monolith-to-microservice migrations, distributed systems, and cloud infrastructure. Currently driving performance engineering and Redis infrastructure at PayNearMe payment platform. Active Rails ecosystem contributor. Recognized for mentoring senior engineers, establishing architectural patterns that scale across teams, and influencing technical direction without formal authority.

Core Impact: Architected Redis time series system with Lua functions for real-time analytics. Reduced critical API latency by 93 percent. Built MQTT-based IoT platform serving thousands of devices. Led platform migrations serving \$500K+ annual revenue. Established CI/CD practices across 20+ person engineering organizations.

TECHNICAL EXPERTISE

Platform Architecture: Distributed systems, microservices migration, event-driven architecture, API design, scalability patterns, Domain-Driven Design, Command Pattern, technical debt management, Redis infrastructure, real-time analytics

Languages & Frameworks: Ruby, Ruby on Rails, Elixir, Phoenix, Go, JavaScript, React, Vue, Python, Flask, C, Node.js, Lua

Platform Services: Payments, Stripe, Plaid, billing systems, identity, authentication, search, Elasticsearch, observability, monitoring, Datadog

Infrastructure & DevOps: AWS, cloud migration, CI/CD, CircleCI, GitHub Actions, Docker, Kubernetes, logging, monitoring

Data & Storage: PostgreSQL, MySQL, Redis, CouchDB, MSSQL, Oracle, SQL optimization, database design

Methodologies: Agile, Scrum, OKRs, SDLC, continuous integration, continuous deployment

PROFESSIONAL EXPERIENCE

Principal Engineer, Performance Team

PayNearMe, Remote

April 2024 - Present

Technical leader for platform performance, Redis infrastructure, and database optimization initiatives. Drive architectural improvements across real-time analytics, callback systems, and data operations while establishing observability practices for high-throughput payment processing platform.

Performance & Infrastructure:

- Architected Redis time series system using Lua functions for real-time anomaly detection, implementing Exponential Moving Average (EMA) and standard deviation calculations with downsampling and aggregation for historical data analysis
- Built custom Ruby framework for dynamic Lua function loading and execution in Redis, establishing foundation for advanced Redis-based analytics and rate limiting capabilities across payment processing infrastructure
- Designed and implemented internal monitoring dashboard with JavaScript charting and timezone handling, providing real-time visibility into API request patterns and callback handler performance metrics
- Optimized database performance through strategic indexing and query optimization, removing unnecessary columns and adding indexes to eliminate full table scans, significantly reducing query execution times and memory usage

Scalability & Reliability:

- Refactored callback processing system with keyed connection pool architecture for multi-threaded operations, migrating to Sidekiq for improved async handling and scalability under high-volume payment transaction loads
- Prepared infrastructure for Sidekiq-Pro migration through gem upgrades (connection_pool, httpx), establishing foundation for advanced job processing features
- Implemented comprehensive timeout handling across database queries and custom success handlers, preventing hanging queries and improving system resilience
- Enhanced error handling and logging with Datadog integration, adding callback suspension reasons and debugging capabilities for production troubleshooting

Code Quality & Observability:

- Established Redis configuration validation to fail fast on missing configuration, preventing silent production failures
- Drove multiple code quality improvements including DRY refactoring of Redis YAML parsing and configuration management across environments
- Fixed random test failures in time series specifications, improving CI reliability and developer productivity
- Optimized FTP downloads and reconciliation queries, reducing database load and avoiding expensive full table scans

Lead Software Engineer

Mudflap, San Francisco, California (Remote)

September 2021 - December 2022

Served as technical leader for API platform serving nationwide fuel savings network for trucking industry. Drove architectural decisions, established engineering best practices, and mentored team

through critical performance and reliability improvements.

Platform Architecture & Performance:

- Architected location-based caching strategy using H3 hexagonal indexing, reducing initial app load time from over 20 seconds to under 1.5 seconds (93 percent improvement), directly enabling improved driver experience and operational scale
- Established Command Pattern architecture across backend services, migrating from AASM callback chains to maintainable command objects for complex business workflows, reducing error rates and improving system observability
- Designed resilient external API integration layer for critical platform services (Stripe payments, Plaid banking, Twilio communications), implementing comprehensive error handling that eliminated double-billing and double-messaging incidents

Infrastructure & Developer Velocity:

- Revitalized broken CI/CD pipeline from 200+ test failures to green builds, restoring continuous integration and deployment confidence across mobile (iOS and Android) and backend teams
- Optimized job processing infrastructure (Sidekiq) with periodic jobs, unique job enforcement, and rate-limiting patterns, improving system stability under peak loads and establishing scalable async architecture
- Cross-platform debugging in Swift and Kotlin mobile codebases to resolve critical production issues

Technical Leadership:

- Mentored engineering team on architectural patterns, testing practices, and production debugging
- Coordinated technical direction across backend API, iOS, and Android teams
- Established error and exception handling standards eliminating unnoticed failures

Head of Software

Frontline Wildfire, Jackson, Wyoming (Remote)

June 2020 - September 2021

Led end-to-end software strategy and architecture for wildfire defense IoT platform. Managed external vendors, internal engineering team, and drove product from prototype through production while ensuring hardware and software integration and regulatory compliance.

Platform Architecture & System Design:

- Architected MQTT-based 2.0 platform revision for IoT controller network, designing for scalability, availability, and real-time communication requirements across distributed hardware deployments
- Built WebSocket API server in Elixir and Phoenix with PostgreSQL, establishing real-time communication layer for mobile apps and controller devices

- Directed firmware and broker development (C language) through external vendors, ensuring tight integration between hardware, edge computing, and cloud platform

Cross-Functional Technical Leadership:

- Collaborated with regulatory stakeholders (water district authorities) on compliance requirements, translating legal and operational constraints into technical specifications
- Debugged hardware and software integration issues including physical plumbing systems, sensor placement, and controller reliability
- Developed React Native mobile prototype and managed external team delivering production mobile applications
- Managed satellite communications software for remote deployments

Organizational Leadership:

- Recruited and scaled remote engineering team, establishing OKR framework and reporting cadence
- Partnered with CEO and founder on product strategy and technical roadmap
- Coordinated across firmware (C), backend (Elixir), and mobile (React Native) teams

Lead Software Engineer

Farmstead, San Francisco, California (Remote)

November 2018 - May 2020

Technical leader in pre-Series A startup building AI-driven grocery platform. Delivered high-velocity feature development while establishing team scalability and production reliability practices.

Platform Development:

- Built hybrid Rails, React, and PostgreSQL platform in hyper-growth environment, balancing rapid feature delivery with system stability
- Architected payments infrastructure integrating Stripe and Plaid for ACH transactions, designing for payment reliability and reconciliation
- Implemented AI and ML-powered route planning and fraud detection systems

Team & Process:

- Recruited and managed remote engineering team, expanding development capacity
- Delivered aggressive marketing-driven feature roadmaps on tight timelines and budgets
- Established development practices enabling startup velocity without compromising quality

Founder & Senior Engineering Consultant

HandleIT, Jackson, Wyoming

December 2015 - November 2018

Founded consulting practice delivering enterprise-scale web platforms, specializing in inventory management systems and complex business process automation. Average annual revenue: \$500,000.

Platform Architecture & Delivery:

- Designed and delivered inventory management platform for Global Foundries (semiconductor manufacturing) using Rails and PostgreSQL with Command Pattern for auditable business process mapping. Delivered on-time and on-budget for mission-critical manufacturing operations.
- Built digital content inventory system for International Education Services using Rails, MySQL, and AngularJS, enabling new product line launch. Delivered on-time and on-budget.
- Established architectural patterns emphasizing maintainability, auditability, and business process alignment

Senior Software Engineer

PeerStreet, Manhattan Beach, California (Hybrid)

December 2014 - November 2015

Core platform engineer for real estate debt marketplace launch. Elevated prototype codebase to production-grade platform serving investors and loan originators.

Platform Engineering:

- Instrumental in platform launch (November 2015), delivering key features for marketplace functionality
- Matured prototype codebase to production standards, establishing stability, performance, and scalability foundations
- Implemented CI/CD pipeline using CircleCI, Heroku, and GitHub, establishing automated deployment practices

VP of Engineering

Amco, San Diego, California

December 2009 - November 2014

Senior engineering leader reporting to CIO. Transformed underperforming IT organization into high-functioning engineering team through process establishment, team development, and infrastructure modernization.

Organizational & Technical Leadership:

- Led 20-person engineering organization including Rails, iOS, Android developers, UI/UX designers, DevOps, and project management
- Established engineering practices including change control, testing standards, backup and recovery, logging, analytics, and issue tracking, transforming ad-hoc development into mature SDLC
- Architected cloud migration from on-premise infrastructure to scalable cloud platform while remediating critical security vulnerabilities

- Improved code quality and error handling across platform, establishing engineering standards organization-wide

Team Development:

- Implemented comprehensive training and assessment programs, significantly improving team competency
- Recruited high-performing engineers while transitioning underperforming team members
- Established mentorship culture and technical growth paths

EDUCATION

Bachelor of Computer Science

University of Technology Sydney, Sydney, Australia

1989 - 1993

OPEN SOURCE CONTRIBUTIONS

Published Ruby gems and contributed to Rails core framework

PROFESSIONAL IMPACT

Energized by translating complex business challenges into elegant architectural solutions that empower teams to move faster while maintaining reliability. Passionate about work that creates measurable impact through technical excellence, pragmatic decision-making, and customer-focused engineering.

Experienced bridging architectural vision between executive leadership and engineering teams.