BRIAN RAINES

Plano, TX | (214) 707-0983 | brian@raines.io | https://raines.io

PROFESSIONAL SUMMARY

Software Engineer with over 25 years of experience designing, building, and scaling complex web-based applications and distributed systems. Known for bringing clarity to complexity, shaping technical direction through hands-on engineering, and building systems that endure. Mentor engineers who grow and establish standards that raise the technical bar across teams.

Equally comfortable designing architectures and writing code, translating complexity into simplicity through thoughtful design and pragmatic execution. Driven by craftsmanship and curiosity, thrive in environments where deep technical work, mentorship, and shared ownership of outcomes define success.

TECHNICAL EXPERTISE

Architecture & System Design - Serverless & event-driven architecture • Distributed systems at scale • Microservices design patterns • API architecture (REST, WebSocket) • Single-table database modeling • Cost optimization strategies • Performance & scalability patterns • System reliability engineering • Technical trade-off analysis

Cloud Infrastructure & Platform Engineering - AWS (Lambda, API Gateway, DynamoDB, S3, Step Functions, SNS/SQS, WebSockets, CloudFormation, SAM) • Infrastructure as Code • Serverless computing patterns • Message queuing & event streaming • Real-time systems • CI/CD pipeline design • Synthetic monitoring • Cloud cost management

Data Architecture & Engineering - DynamoDB (Single-table design, access pattern modeling) • PostgreSQL • MySQL • MongoDB • Redis • Data modeling for scale • Query optimization • Database migration strategies • Multi-tenant database architecture patterns • ETL and Datawarehousing

Technical Leadership & Enablement - Architecture review & technical standards • Cross-team collaboration & influence • Engineering mentorship & capability building • Technical strategy & roadmap planning • Build vs. buy evaluation • Technical documentation & knowledge sharing • Team scaling & best practices

Development & Integration - Java • Python • Node.js • PHP • JavaScript/TypeScript • Modern framework evaluation • Third-party API orchestration • Legacy system modernization • PLC & hardware integration

PROFESSIONAL EXPERIENCE

Turnitin — Dallas, TX
Distinguished Software Engineer | *2022 — Present*
Principal Software Engineer | *2021 — 2022*

Built and evolved cloud-native, serverless platforms at global scale, defining architecture patterns, and development standards through working systems now used company-wide.
Organizational Impact:
- Author and implement SAM driven serverless patterns through working systems that have become the organizational standard.
- Mentor engineers across multiple teams on distributed systems, DynamoDB modeling, and event-driven design.
- Partner with engineering leadership on technical strategy and platform architecture decisions.

Award: 2024 Values Champion Regional Winner: Americas "Action and Ownership, One Team"

Paper to Digital Platform (2022 — Present)

Developed an AI-powered extension to Turnitin Feedback Studio that expanded assessment capabilities beyond digital submissions to include paper-based evaluations featuring short answers, multiple choice, handwritten diagrams, and mathematical equations. The solution combined serverless architecture, real-time collaboration, and secure AI/OCR workflows to deliver scalable compliant performance.

- Architected serverless, event-driven backends in AWS achieving 99.9% reliability and horizontal scalability.
- Implemented DynamoDB single-table design and Step Functions for complex AI/OCR workflow orchestration.
- Built real-time collaboration via WebSocket APIs enabling synchronous grading and feedback.
- Developed test automation that included unit tests, integration tests, end-to-end tests, and synthetic canaries.
- Ensured TX-RAMP compliance and certification, maintaining rigorous state-level security standards.

Award: Tech & Learning "Best Tools For Back to School 2024" for Turnitin's Paper to Digital Add-On for Feedback Studio

Usage Analytics Platform (2021 — 2022)

Designed and implemented an event-driven ETL pipeline leveraging SNS, DynamoDB Streams, and Kinesis Data Firehose to ingest and transform real-time customer engagement data into Amazon Redshift, visualized through QuickSight dashboards to drive consumption-based billing insights across the product portfolio.

Stack: AWS (Lambda, API Gateway, WebSocket, DynamoDB, Step Functions, SNS/SQS, SAM), Serverless Architecture, Event-Driven Systems

---

ExamSoft (Acquired by Turnitin 2021) — Dallas, TX
Software Engineer IV | *2019 — 2021*

High Volume Assessment Password Management (2021)

Re-engineered a legacy WordPress solution into a serverless, auto-scaling architecture leveraging AWS services, delivering high concurrency and reliability for hundreds of thousands of simultaneous assessment credential requests.

Migration of Liftupp from PHP Monolith to AWS Serverless (2019 - 2020)

Led modernization of an acquired monolithic PHP platform into serverless Java microservices running on AWS.

- Reverse-engineered and migrated API endpoints to Lambda-based services, improving scalability and maintainability.
- Guided the team through database migration to AWS RDS and DocumentDB.
- Mentored PHP engineers transitioning to AWS and Java development.

Stack: Java, PHP, PostgreSQL, MongoDB, Redis, AWS (Lambda, API Gateway, RDS, Cognito, ElastiCache, DocumentDB)

Award: 2020 Engineering Will-to-Win Employee of the Year

Innovar Solutions — McKinney, TX
Lead Software Developer (Consultant) | *2018 — 2019*

Architected and delivered a modern SaaS platform that unified multiple legacy business systems into a single, real-time interface for commercial scheduling and operations. The solution leveraged a robust RESTful backend, dynamic frontend, and modern engineering practices to enhance performance, maintainability, and team productivity.

- **Developed a Symfony RESTful API backend and Vue.js SPA frontend**, enabling real-time data synchronization and consolidating third-party TV commercial purchasing and scheduling workflows into a unified UI.

- **Integrated and decommissioned multiple legacy systems**, reducing operational complexity and long-term technical debt.
- **Mentored junior developers in system design, debugging, and framework best practices**, strengthening overall engineering capability and code quality.

Stack: PHP (Symfony), MSSQL, Vue.js, Bootstrap, Windows Server

---

Speed Commerce — Dallas, TX
Application Architect | *2010 — 2018*

Architected and developed a suite of enterprise-scale fulfillment and warehouse systems supporting multi-million sq. ft. distribution centers and thousands of concurrent users.

- **Designed and deployed order fulfillment and warehouse control systems** with event-driven processing.
- Built real-time OMS integrations with PLCs, sortation systems, and shipping carriers (FedEx, UPS, USPS).
- Developed multi-language, SaaS-enabled platforms powering global eCommerce for Fortune 500 retailers.
- Created mobile tools for warehouse staff using Motorola RhoElements for wearable devices.
- Delivered scalable, resilient systems managing packing automation, store fulfillment, and warehouse logistics orchestration.

Stack: PHP 5/7, Symfony, Redis, PostgreSQL, AS400, Microservices, REST APIs, Real-Time Messaging

---

Early Career (2000 — 2008)
Senior PHP Developer — StoneEagle, Credit Solutions
Senior Developer / Engineering Lead — New Media Gateway, Crosswerk, Oven Digital
Intranet Coordinator — Garden.com
Freelance Web Developer - Siegel Gale, Credit Suisse First Boston, BLUEprint

Progressively responsible roles building enterprise applications, leading development teams, and architecting marketing automation systems for Fortune 500 clients including Sprint, Harrah's, ING, Tiffany, and Consumer Reports.

Stacks: PHP, Symfony, CakePHP, Zend Framework, MySQL, MSSQL, SOAP/XML, ExtJS, ASP, JSP, JavaScript/DHTML

EDUCATION

B.S., Business Administration — University of Texas at Dallas

ADDITIONAL INFORMATION

Portfolio and technical write-ups available at https://raines.io