

MATTHEW FITZPATRICK

Principal Software Architect · Technical Consultant · AWS Solutions Architect (Professional)
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EXECUTIVE PROFILE

Senior technical leader and AWS Certified Solutions Architect (Professional) with nearly 20 years of experience in distributed systems, high-concurrency architectures, and product-focused engineering. Expert in spec-driven AI development, leveraging LLMs (Claude, Codex, Kiro) to accelerate the SDLC while maintaining rigorous internal design documentation. Specialist in modernizing enterprise legacy systems into horizontally scalable, cloud-native environments and managing high-performing engineering teams.

CERTIFICATIONS & STRATEGIC CORE TECH

- **AWS Certified Solutions Architect – Professional:** (Jan 2019) — 9+ years of extensive experience in AWS ecosystem design.
- **Architecture & Design:** Microservices, Domain-Driven Design (DDD), Test-Driven Development (TDD), RESTful/GraphQL/SOAP service architecture.
- **Modernization Specialist:** expert in refactoring monolithic legacy systems (PHP 4/5, Magento 2, Oracle ATG) into modern, containerized environments.
- **AI-Driven Development:** advanced implementation of spec-driven patterns using AI tooling to automate boilerplate, unit testing, and documentation.

TECHNICAL COMPETENCIES

Cloud & DevOps	AWS (9+ yrs / Solutions Architect Professional), Docker, Docker-Compose, ECS, Serverless, CI/CD (Jenkins, Capistrano), Nginx, HAProxy, AWS SQS, S3, CloudFront
Backend & Architecture	PHP 5/7/8 (Laravel, CodeIgniter), Node.js, C# (.NET Core), Java (Spring/Hibernate), RESTful, GraphQL, SOAP, Microservices, TDD, Domain-Driven Design (DDD)
Data & Caching	MySQL (Optimization/Admin), MSSQL, Redis, Memcache, Elasticsearch, MongoDB, DynamoDB, PostgreSQL
Frontend & Mobile	React, AngularJS, jQuery (custom plugins), HTML5/CSS3/Sass, Swift (iOS), Socket Communication
Technical Strategy	Spec-Driven AI Development, Technical Due Diligence, Interview Design, Team Mentorship (teams of 4–10+), Agile/Scrum

PROFESSIONAL EXPERIENCE

FitzPatrick Software

Principal Software Architect Consultant

Jan 2015 – Present

Irvine, CA · Remote/Hybrid

- **Architectural strategy:** primary technical advisor for product stakeholders, translating business goals into technical requirements and evaluating time-vs-debt trade-offs for high-growth organizations.
- **Spec-driven AI implementation:** established high-velocity patterns by authoring internal design specs that drive AI-assisted development (Claude/Codex/Kiro) while preserving architectural consistency.
- **Enterprise identity & security:** implemented secure SSO solutions by integrating with SAML 2.0, Microsoft Active Directory, and custom OAuth 2.0 providers.
- **Legacy modernization (Tax Credit Exchange):** overhauled a legacy CodeIgniter application by implementing a modern Docker-based build strategy and designing a Laravel-driven GraphQL/REST API layer.

- **Scalable e-commerce (Envoy):** architected a greenfield Laravel REST API with a React frontend, heavily leveraging Elasticsearch and Redis for real-time activity streams.
- **Infrastructure & CI/CD:** orchestrated complex AWS deployments using ECS clusters and automated continuous integration pipelines via Jenkins and custom bash scripting.
- **Engineering management:** defined technical interview processes and led teams of 4–6 developers across standups, code reviews, and feature roadmaps.

Sportle

Head of Engineering

Jun 2015 – Sep 2016

Santa Monica, CA

- **Platform architecture:** designed and built a high-concurrency web and API application from the ground up using Laravel 5, MySQL, and Doctrine 2 ORM.
- **Advanced search:** engineered a custom search layer on Elasticsearch with fuzzy n-gram matching and geo-location relevancy, managing custom EC2 clusters for high availability.
- **Distributed processing:** leveraged Amazon SQS for queued distributed tasks and Redis for process locking to allow for independent horizontal scaling.

VirtualPiggy / Oink

Director of Engineering

Jan 2014 – Nov 2014

Hermosa Beach, CA

- **High-stakes processing:** co-authored a new transaction engine using C#, RabbitMQ, and asynchronous service calls within a PCI-compliant environment.
- **Global product launch:** served as the sole developer and technical lead for Oink's Facebook payment integration, coordinating with stakeholders in the UK and China.
- **Monolith decomposition:** initiated the restructuring of a monolithic payment system into modular, horizontally scalable services.

ADDITIONAL ARCHITECTURAL PROJECTS

- **CRM for Non-Profits (Dreambase):** built an MVP for NYU's social entrepreneurship program in three months; implemented a Laravel/PHP 7 GraphQL API with data mirroring in Redis and MongoDB.
- **Marketplace Optimization (DogVacay):** refactored an Airbnb-style e-commerce platform; optimized long-running queries and resolved referential integrity issues in massive MySQL databases.
- **Educational ETL Platform:** built a Laravel-based solution to aggregate data from internal databases, QuickBooks, and CRMs for automated lifecycle marketing.
- **Media CMS (EQAL):** designed a CMS layer using Yii and Dwoo; interfaced with Java Grizzly services via signed cURL calls with custom memcache namespacing.

EARLY CAREER HIGHLIGHTS (2005–2010)

- **Swell / Brandtailers / Arbonne:** MySQL database design and web application scripting (PHP 5 / Java) for marketing and business intelligence platforms.
- **Lifetime Memory:** managed Linux server administration (Apache, MySQL, CVS) and developed QA tracking tools using Java Swing/JDBC.