

Ryan M. Waite

Systems Architect & Software Engineer

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PROFESSIONAL SUMMARY

Software Engineer with 10+ years of experience, now specializing in AI-assisted engineering, operations, and cloud infrastructure. Strong customer & results focus. Using Claude Code and SDD (Spec Driven Development via OpenSpec) to develop AI skills & workflows that accelerate delivery, improve code quality, and reduce cycle time. Deep expertise in Python, JavaScript/TypeScript, AWS architecture (Solutions Architect, Certified Developer, and SysOps Admin), and production data pipelines in regulated financial environments. Combines hands-on engineering with emerging AI operations skills: specification precision, evaluation frameworks, multi-agent decomposition, failure pattern recognition, context architecture, and cost/token economics.

AI OPERATIONS SKILLS

AI-Assisted Dev	Claude Code, Windsurf, prompt engineering, AI-augmented code review and testing; SDD (Spec Driven Development)
Context Architecture	Creating PRDs (Product Requirement Documents) to capture product intent, feeding into specs for AI development
Evaluation & QA	AI output validation, error detection in fluent output, edge case identification, automated eval harnesses. Using CLAUDE.md as the authoritative guide for implementation
Cost Economics	Token usage optimization, model selection (Haiku vs Sonnet vs Opus), cost-per-task analysis, ROI modeling

TECHNICAL SKILLS

Languages	Python, JavaScript/TypeScript, Java, SQL
Cloud / AWS	EC2, ECS, S3, Lambda, API Gateway, Step Functions, EventBridge, CloudWatch, CloudFormation, IAM, RDS, SQS, SNS
Frameworks	Django, Flask, AngularJS/Angular, SolidJS, React, Spring Boot & Spring JPA/Hibernate, Node.js, Express, NestJS, Prisma ORM
Data / DB	PostgreSQL, S3 data lakes
DevOps	Git, GitHub/BitBucket, Jenkins, Docker, CI/CD pipelines, Artifactory, Terraform, CloudFormation

EXPERIENCE

Capital One | Principal Associate, Software Engineer | McLean, VA

April 2024 – Present

Finance Services Tech

- **Architected Event-Driven Design** for transforming business logic from running on a schedule via EventBridge to event driven architecture, speeding up activations for client products.
- **Designed Event-Driven General Purpose Schema** for creating unified stream for kafka topic, allowing multiple consumers to subscribe and react to specific events via filters
- **Improved Docker-First development practices**, setting up standards & scripts for local docker development, leading to improved testing and reducing turn-around time for deployments and releases
- **Led effort for modernizing** customer facing portal application: providing insight and guidance toward implementation, owning database & API design and guiding junior dev for API implementation
- **Led for implementing new product intent** creating new internal application to migrate away from using Salesforce, owning both UI and backend logic and implementation using SolidJS and Spring Boot
- **Contributed to engineering culture improvements** by leading team members, contributing AI adoption patterns to enterprise repository, and presenting at IC meetings with product and tech managers

- **Primary support personnel** leading effort to resolve escalations to my team, serving as the main point of contact for supporting dependent teams.

Technologies: Python, AWS (S3, Lambda, ECS, EventBridge, Terraform, CDK, CloudWatch), Claude Code, Windsurf, Git, SolidJS, Spring Boot, TypeScript, Jenkins, GitHub, Docker

FINRA | Staff Software Engineer | Rockville, MD

July 2019 – April 2024

DDWA, BrokerCheck, NGA

- **Assisted Cloud Migration** rewriting DDWA UI applications using Angular to be cloud-native (S3 & CloudFront), migrating away from on-premises infrastructure.
- **Lead Developer for DDWA UI application** - the primary developer responsible for maintaining and extending internal and external UI apps on the team
- **Co-Lead effort for re-writing legacy apps** - Worked with another UI developer in re-writing legacy apps from AngularJS to Angular, part of effort to optimize deployment and move to more cost efficient solution (s3 bucket & cloudfront)
- **Lead frontend modernization effort for NGA** re-writing legacy UI application from AngularJS (deployed as apache ecs task) to Angular. Also updated backend logic written in Scala.
- **Lead effort to improve security of UI** optimized logic to include CSRF protection on all UI apps

Technologies: AngularJS/Angular, Spring Boot, Python, Tailwind CSS, PostgreSQL, AWS, Scala & Play 2, Docker, Jenkins, CloudFormation

Cloudistics | Frontend Software Engineer | Reston, VA

November 2018 – July 2019

Private Cloud Infrastructure

- **Portal Application for client** migrated AngularJS to Angular applications, incorporated multi-language support, maintaining and extending functionality to support private cloud architecture with on-premise feel.

Technologies: AngularJS, Angular

Dept. of Labor | Senior Web Developer | Herndon, VA

February 2016 – November 2018

Content Management for OSHA

- **Drupal** migrated from using basic HTML files to using Drupal and defining content types for the various types of publications by OSHA's public, intranet, and whistleblower sites.

EDUCATION

Master of Science, Cloud Computing Systems

University of Maryland Global Campus | 2023 – 2024

Bachelor of Science, Computer Science

University of Maryland Global Campus | 2020 – 2021

CERTIFICATIONS

AWS Solutions Architect Associate | Amazon Web Services | March 2025

AWS Certified Developer Associate | Amazon Web Services | June 2025

AWS Sysops Admin Associate | Amazon Web Services | August 2025