Fernando Vazquez

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Professional Summary

Software engineer with 4+ years at AWS building provisioning and orchestration systems for AWS's baremetal server fleet, focused on security hardening, reliability, and operational automation. Experienced across Perl, Ruby, Python, and TypeScript services and AWS (Aurora, CloudWatch, Lambda, EventBridge, IAM, S3, DynamoDB, CloudFormation/CDK).

Skills

Languages	Python, JavaScript, Ruby, Perl, C++, Kotlin, Java
Backend & Cloud	AWS (Aurora, DynamoDB, Lambda, EventBridge, SWF, IAM, CloudFormation/CDK), MySQL, REST APIs, distributed systems, Docker, Nginx
Frontend & Frameworks	Astro, React, HTML/CSS, Node.js, Flask, Spring Boot
DevOps & Infrastructure	Docker, Jenkins, GitHub Actions, CI/CD, Linux, Nginx, Infrastructure as Code
Observability	CloudWatch, Prometheus, Grafana, alarms and dashboards, runbooks

Experience

Software Development Engineer II (L5) **September 2022 — November 2026**

AWS - Infrastructure Foundational Systems (IFS), EC2 Capacity: server provisioning and rack orchestration *Seattle, WA*

- Led a security migration of about 544 long-term IAM credentials to short-term, auto-rotating credentials across 6 services (Perl and Ruby) and 60+ AWS accounts in all AWS partitions. Built reusable auth libraries in both languages and added monitoring, passing the security audit.
- Retired a 13-year-old legacy Perl service by migrating its logic into an existing Ruby service. This eliminated 30+ dedicated hosts and an 8-stage pipeline, ended 10+ Sev2 incidents, and automated job setup for new region builds. The new system today validates ingestion of all EC2 rack capacity, an estimate of 2 million monthly hosts.
- Designed automated failover for a global Aurora MySQL database, cutting failover time from 60 to 6 minutes, reducing planned downtime by 70%, and helping raise availability from 98% to 99.95%.
- Led a phased rollout of input validation across 80 active APIs of a legacy service (after retiring 50 unused ones), validating 100M+ requests and earning security sign-off.
- Built a rack-handoff validation that unblocked rack launches in restricted regions, processing 50K+ racks and 1.25M+ hosts without false blocks.

DevOps Engineer **September 2021 — September 2022**

Nisum *Fremont, CA*

- Built internal web applications with React and Spring Boot and deployed them to a live Azure Kubernetes Service (AKS) cluster, supporting 4 internal projects.
- Created CI/CD pipelines with Jenkins and Docker to automate building, testing, and deploying containerized applications, reducing deployment time from 60 minutes to 15 minutes and eliminating manual release steps.

Projects

Personal Portfolio Website **November 2026**

- Modernization & Performance: Rebuilt a Create React App single-page portfolio as a statically generated Astro site with React components, hydrating only the interactive pieces (navigation menu and experience tabs) to minimize client-side JavaScript while preserving the original design and animations.
- Accessibility & UX: Implemented ARIA-compliant tabs with keyboard navigation, automatic light and dark themes via prefers-color-scheme, reduced-motion support, responsive layouts, and a custom error pages.

Automated Linux & Containerized Home Lab Environment **June 2026**

- Architecture & Distributed Storage: Designed and operated a multi-node infrastructure decoupling compute workloads (Ubuntu Linux) from a high-performance ZFS-backed storage array (TrueNAS) mounted over NFSv4 on a 2.5GbE local network.
- DevOps & Containerization: Standardized 30+ microservices using Docker Compose and Infrastructure-as-Code principles in Git, implementing automated CI/CD checks via GitHub Actions and automated container lifecycle monitoring.
- Edge Networking & Security: Engineered a secure external ingress gateway using OPNsense, Nginx reverse proxies, automated ACME SSL/TLS certificate management, and Cloudflare DNS, fortified by log-based intrusion prevention
- Full-Stack Observability: Deployed a comprehensive telemetry and alerting pipeline utilizing Prometheus, Grafana, cAdvisor, and Uptime Kuma to monitor real-time resource utilization, container health, and service availability.

Education

University of California, San Diego ***La Jolla, CA***

Bachelor of Science - Computer Engineering *Graduation Date: June 2021*