

Software engineer specializing in scalable backend architecture and seamless client-side experiences through proven cross-functional collaboration with Engineering, Product, Data, Security, and Quality teams. Delivers data-driven systems with end-to-end metrics and logging to provide actionable insights for monitoring mission-critical services and tracking KPIs.

TECHNICAL SKILLS

Languages	Java, Kotlin, Python, Javascript (<i>TypeScript, NodeJs, AngularJs</i>), Bash		
Infra App Components	Compute; <i>EC2, Fargate, Lambda</i>	Object Storage; <i>S3</i>	Infra Code; <i>CDK, Ansible</i>
	Database; <i>DynamoDB, PostgreSQL</i>	Warehousing; <i>Redshift, MongoDB</i>	DNS & Routing; <i>Route 53</i>
	Events; <i>SNS, KAFKA, RabbitMQ</i>	Workflows; <i>SWF</i>	Networking; <i>VPC</i>
Infra Support and Monitoring	AWS Cloudwatch Service; <i>Logs, Log Groups, Metrics, Alarms, Dashboards</i>		
Dev Env	Support Ticketing; Routing; <i>Generation, Response, Management</i>		
	Linux, Android, GIT, VMWare/VirtualBox, Kubernetes/Docker, AWS, Regex		

WORK EXPERIENCE

Amazon - AWS

May 2022 - June 2024

- Led and mentored the team in delivering a public endpoint service for customer-facing Amazon One (AO) Enterprise Devices. The service efficiently managed high traffic while maintaining data integrity and confidentiality; it encrypted Palm Images, Biometric IDs, and Badge IDs through backend security measures, ensuring secure transmission, utilization, and modification of data across all internally-facing components. This allowed customers to use Corporate Badges stored in internal systems by simply hovering their palm over externally-facing Amazon devices.
- Developed a Kotlin-based Android App for Amazon One clients to verify 21+ eligibility of a customer at stadiums using an external-facing AO device and an off-the-shelf Android device. Implemented HMAC encryption between wired devices to ensure data integrity and confidentiality when transmitting data received from a palm hover.
- Extended the customer-facing AO Android App to support Starbucks gift card payments. Delivered this more generally by linking 3rd party data, such as a SBX barcode, to internal identifiers on-device through a secure API.

Amazon - Whole Foods Market

Sept 2018 - May 2022

- Led the development and rollout of an Inventory Restocking application, launching an MVP in 10 pilot stores and scaling to over 500 WFM stores nationwide. Ensured smooth rollouts system-wide using feature flags and code pipelines. Designed end-to-end solutions to guide team implementations for efficiency, scale and maintenance, reaching millions of item events daily at peak. Delivered \$40M in annual savings through improved store operations.
- Led design and implementation of two smart dashcart checkout processes to enable "Just Walk Out" shopping. Built AWS SWF workflows triggered at 'checkout zones' to auto-charge their account-linked credit card along with email receipt workflow confirmations upon store exit. Used serverless architecture to keep application overhead at a minimum and enable monitoring via observable metrics.

Space and Naval Warfare Systems Command (SPAWAR) via SAIC

May 2017 - July 2018

- Enhanced service deployment and network security for the v22 Osprey data infrastructure by automating RedHat instance provisioning and network configuration with VMware and Ansible. Developed dynamic Layer 3 proxy routing and application firewalls, contributing to a more reliable and secure data environment.

Comcast via Tureus

March 2017

- Developed an ETL pipeline to ingest parking meter data into PostgreSQL using Python microservices and Kafka topics. Designed flexible schemas with Alembic migrations to improve data accessibility and analysis.

RetailOps

Feb 2013 - Dec 2016

- Delivered improvements to client data access by building and maintaining data pipelines and infrastructure. Key accomplishments include: real-time data integration from RabbitMQ to MongoDB, consolidating client data from their API's to MySQL, optimized media delivery with a NodeJS proxy, and enhanced client search capabilities through Elasticsearch.

EDUCATION

University of California, San Diego
2008-2013

B.S. Computer Science and Mathematics
B.S. Computation *specialization in Machine Learning and AI*