

## SUMMARY

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