

SUMMARY

Software engineer with proven track record of bridging complex backend systems to constrained low-latency consumer interfaces (biometrics, handhelds, smart carts). Cross-functional collaborator with Engineering, Product, Data, Security, and Quality teams that delivers backward from customer stories for MVPs, system extensions, and system scaling alike. Implements data-driven systems with end-to-end metrics and monitoring across mission-critical services and tracking KPIs to ensure operational excellence.

WORK EXPERIENCE

Amazon - AWS

May 2022 - June 2024

- Led and mentored team to deliver an external service endpoint for Amazon One (AO) Enterprise devices to perform secure badge-in through a seamless palm hover authentication for a customer pool managed on the AWS Console. It securely managed sensitive customer Palm Images, Biometric IDs, and Badge IDs between all internally-facing backend systems. The service scaled to handle 1000 TPS across 12 APIs while maintaining data integrity and confidentiality.
- Led and mentored team to deliver a Kotlin-based Android App for Amazon One clients to seamlessly verify 21+ eligibility of a customer using a palm hover. Worked with product to devise a user workflow that fit device constraints between the off-the-shelf Android device framework and the custom AO device, collaborating with the AO device framework owners where needed. Extended data integrity and confidentiality from backend systems while maintaining a low-latency user experience between devices.
- Collaborated across teams to add Starbucks Gift Card support to the Amazon One palm hover experience for fast checkout. Extended backend systems to map 3rd party identifiers, such as a Gift Card barcode, to internal biometric identifiers on-device through a secure API.

Amazon - Whole Foods Market

Sept 2018 - May 2022

- Drove \$40M in operational savings by developing and rolling out an Inventory Restocking application running on enterprise handheld scanners (Honeywell), enabling store associates to scan and submit store items to vendors for store replenishment. Launched an MVP in 10 pilot stores and scaled to over 500 WFM stores nationwide.
- Architected and mentored team through extensions for the Inventory Restocking application to have it proactively suggest items to store associates. Negotiated new app workflow and API contracts with product and UX to deliver single and batch APIs to handle high event throughput to meet customer needs. Prioritized delivery to meet MVP and production rollout phases. Deployed background jobs that would scale to the processing of millions of item events daily at peak without impacting on-site store operations.
- Led design and implementation of smart dashcart checkout to enable "Just Walk Out" shopping. Delivered a workflow solution triggered by a customer entering a 'checkout zone' to auto-charge the customer and send email receipts upon store exit. Used serverless architecture to keep overhead at a minimum and enable monitoring via observable metrics.

Space and Naval Warfare Systems Command (SPAWAR) via SAIC

May 2017 - July 2018

- Engineered mission-critical infrastructure automation for v22 Osprey support, securing data environments via dynamic Layer 3 proxy routing and application firewalls. Reduced deployment friction while strictly adhering to defense-grade security standards.

TECHNICAL SKILLS

Languages	Java, Kotlin, Python, Javascript (<i>TypeScript, NodeJs, AngularJs</i>), Bash		
Infrastructure 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 Monitoring	AWS Cloudwatch Service; Structured Logs, Log Groups, Metrics, Alarms, Dashboards		
Infra Support	Support Ticketing, Generation, Response, Runbooks		
Dev Env	Linux, Android, GIT, VMWare/VirtualBox, Kubernetes/Docker, AWS, Regex		

EDUCATION

University of California, San Diego	B.S. Joint Mathematics and Computer Science
	B.S. Cognitive Science with specialization in Machine Learning and AI