

SUMMARY

12+ years at Amazon, specializing in large-scale cloud observability and video streaming. Built reliable real-time systems at **AWS** and **Amazon Prime Video** that handle billions of events daily and deliver smooth playback to millions of users.

WORK EXPERIENCE

Senior Software Engineer

Bellevue, WA

Amazon Web Services (AWS)

03/2019 - 01/2026

Built and scaled high-performance backend systems and **Cloud architecture for AWS, powering reliable, low-latency services** for millions of customers worldwide.

- Owned real-time metric ingestion pipelines in **Python** and **Java**, integrating **Kafka streaming** to handle billions of events daily with sub-second latency.
- Designed and optimized **REST API** and **GraphQL** endpoints for **CloudWatch** metrics querying, reducing API response times by 40% under high load.
- Integrated **generative AI** into CloudWatch Logs Insights to enable natural language query generation from user prompts.
- Developed interactive real-time dashboards in **React**, **JavaScript**, and **TypeScript**; used **WebSocket** for live updates and complex visualizations, improving user troubleshooting speed and reducing MTTR by 35% for DevOp teams.
- As L5, owned observability SLOs/SLIs for real-time features; implemented anomaly detection in **Python**, **composite alarms**.
- Enhanced secure data flows for real-time metrics using **REST API/GraphQL** with **IAM** auth, encryption, and logging in **JavaScript/Python**.
- Led CI/CD pipelines using **AWS CodePipeline**, **CodeBuild**, and **GitHub Actions**; automated testing, deployments, and rollouts for **CloudWatch** real-time features, cutting release cycles by 25%.
- Built unit tests (**JUnit/Pytest/Jest**) covering 92% code for backend **Java/Python** services and frontend **TypeScript** components, ensuring high reliability in production releases.
- Solved high-cardinality and throttling challenges in real-time monitoring; refactored Kafka-inspired buffering and Lambda processing in **Python**, boosting metric freshness by 50% and enabling instant alerts.
- **Mentored** team members on unit testing and CI/CD best practices tailored to AWS-scale

Contributed to scalable backend systems and streaming features for **Prime Video**, delivering low-latency playback and personalized content to millions of global users.

- Built video ingestion and processing in **Go** (goroutines + channels) with **Kinesis** – reduced latency by 50% for live streams.
- Implemented adaptive streaming in **Go** (HLS/DASH manifests, segmenting, quality ladders) – lowered rebuffering by 45%
- Developed mobile playback UI and logic in **React Native** (iOS/Android), **TypeScript**, and **JavaScript** – added **WebSocket** for real-time bitrate & buffering display, cut mobile playback errors by 40%.
- Improved mobile adaptive streaming with **React Native** quality switching and prefetching – increased average bitrate by 30% on phones/tablets.
- Wrote unit tests (Go testing, Jest) with 90%+ coverage and supported CI/CD pipelines – sped up releases by 60%.
- Enhanced personalization using **Amazon Personalize** and real-time events in Go/Python – boosted watch time by 35%.
- Added mobile session monitoring with **CloudWatch** metrics from **React Native** app – helped maintain 99.99% availability.

SKILLS & TECHNOLOGIES

Programming Languages: Java, Python, C#, Go, Node, Ruby on Rails, JavaScript, TypeScript, PHP, C++

Frameworks & Libraries: Spring Boot, Django, Flask, FastAPI, Gin, Express.js, Nest.js, React, React Native, Angular, Next.js, Vue.js, D3.js, LangChain, LangGraph, PyTorch, scikit-learn, PySpark, TensorFlow, Dialogflow, Laravel

Cloud & Infrastructure: AWS (Lambda, S3, ECS, Glue, Kinesis), Azure, GCP, Kubernetes, Docker, Terraform, Jenkins

Data & Messaging: Apache Kafka, Spark, PostgreSQL, MySQL, MongoDB, SQL Server, Cassandra, Redis, OpenTelemetry

API & Integration: FHIR/HL7, WebRTC, RESTful APIs, SIEM, PCI DSS Compliance, HIPAA Compliance

Testing & Monitoring: Jest, Cypress, Playwright, Mockito, CloudWatch, WebSocket, Datadog

Streaming & Video Pipeline Technologies: HLS, DASH, Adaptive bitrate streaming, Transcoding, Segmenting / chunking, Manifest generation, Packaging, Low-latency live streaming, DRM, Quality ladders / bitrate switching, Prefetching, CloudFront

Methodologies: CI/CD, Agile/Scrum, Distributed Systems, Penetration Testing

EDUCATION
