SEAN HAYES (**Active Top Secret)**
Backend / Cloud Software Engineer (SWE III / SRE-aligned)
Charlotte, NC
Email: smh986@gmail.com
GitHub: https://github.com/ksdbh
LinkedIn: https://linkedin.com/in/sean-hayes-8015b277

SUMMARY

Backend and cloud software engineer with 4+ years of experience designing, building, and operating distributed systems in regulated production environments. Strong background developing AWS-native services and Kubernetes-deployed Java/Spring Boot APIs, with a focus on correctness, performance, observability, and reliability at scale. Experienced in debugging complex production issues, applying data-structure-driven solutions to real systems, and shipping changes safely through testing, CI/CD quality gates, and staged rollouts. Comfortable owning services end-to-end and collaborating across security, infrastructure, and product stakeholders.

CORE SKILLS

Languages: Python, Java (Spring Boot), Go (foundational), JavaScript
Cloud & Infra: AWS (Lambda, S3, SQS, DynamoDB, API Gateway, IAM, CloudWatch), EKS, Docker, Kubernetes, Helm
Distributed Systems: Kafka, Redis (ElastiCache), PostgreSQL
Observability: Elastic/ELK, Kibana, Prometheus, Grafana
CI/CD & Quality: GitLab CI/CD, GitHub Actions, SonarQube (quality gates), dependency scanning
Infrastructure as Code: Terraform
Practices: Distributed system design, incident response, on-call, postmortems, testing, code reviews, security & compliance

PROFESSIONAL EXPERIENCE

GENERAL DYNAMICS INFORMATION TECHNOLOGY (GDIT)
Software Engineer III
Charlotte, NC | Jan 2023 – Present

- Designed, developed, and operated Java Spring Boot microservices deployed via Kubernetes and Helm, implementing health probes, resource limits, and rollout strategies to ensure correctness and reliability under production load.
- Improved system robustness by introducing idempotent request handling, bounded retries, and failure isolation patterns, reducing cascading failures across service dependencies.
- Built and maintained CI/CD pipelines using GitLab CI with SonarQube quality gates, static analysis, and dependency scanning to enforce code quality, testability, and safe delivery.

- Debugged complex production issues by correlating logs, metrics, and request behavior across distributed services; identified non-obvious failure modes and implemented permanent fixes.
- Participated in architecture, design, and code reviews, evaluating trade-offs related to performance, scalability, security, and maintainability; mentored junior engineers on production-readiness standards.
- Collaborated closely with security and compliance teams to implement least-privilege access controls and audit-ready deployment workflows without sacrificing developer velocity.

TIAA
Software Engineer (Backend / Cloud)
Charlotte, NC | 2021 – 2022

- Developed AWS-native backend services using Lambda, SQS, S3, DynamoDB, and API Gateway, designing event-driven workflows that handled partial failures and high-throughput workloads safely.
- Built and hardened Kafka-based data pipelines, introducing dead-letter queues (DLQs) and idempotent consumers to prevent duplicate processing and reduce failure amplification.
- Applied algorithmic thinking to production systems by selecting appropriate data structures and processing strategies to efficiently deduplicate events, aggregate records, and avoid quadratic behavior in data flows.
- Performed root-cause analysis on latency spikes and intermittent failures by analyzing logs, metrics, and message patterns; reduced MTTR through targeted fixes and improved observability.
- Implemented Redis (ElastiCache) caching strategies and DynamoDB schema and partition design to reduce read latency and improve system throughput.
- Wrote unit and integration tests for backend components and validated changes through staged deployments, ensuring backward compatibility and production safety.
- Participated in on-call rotation, led post-incident reviews, and drove long-term reliability improvements rather than one-off fixes.

PROJECTS

RAGEdu – AWS-based Retrieval-Augmented Learning Platform (Personal Project)
https://ksdbh.github.io/RAGEdu-starter/

- Designed and implemented a distributed learning platform using FastAPI/Django and Go (gRPC), applying API-first design and schema validation to ensure correctness and evolvability.
- Built Terraform-based infrastructure, CI/CD pipelines, and observability (Prometheus, Grafana, ELK) to support safe iteration and production-like reliability.
- Focused on system behavior under failure, secrets management, and service-to-service communication patterns.

EDUCATION & CERTIFICATIONS

Bachelor’s Degree, Computer Science
UNC Charlotte — Magna Cum Laude

Certifications:
• AWS Certified Cloud Practitioner (CLF-C02)
• Google Data Analytics Professional Certificate
• AWS Solutions Architect – Associate (SAA-C03) – In Progress