ASTTLE JOSEPH

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PROFESSIONAL SUMMARY

Highly accomplished DevOps Engineer with 5+ years of expertise, specializing in building and optimizing scalable cloud infrastructure for AI, robust CI/CD, and advanced observability solutions across multi-cloud environments (AWS, Azure). Proven track record in orchestrating seamless migrations, implementing GitOps, and enhancing system reliability, security, and cost efficiency. MSc with first-class honours; authorized to work in the UK.

EXPERIENCE

DevOps Engineer, 08/2024 - Current
SigTech – London

- Successfully deployed AI services and models in cloud environments, establishing robust infrastructure for model training, serving, and monitoring, including production deployment of open models (e.g., o3-mini).
- Implemented and optimized GHA pipelines with Azure Sig-RAG CI for automated image updates and promotion pipelines from development to production for AI deployments, enhancing deployment efficiency and reliability.
- Enhanced comprehensive observability across environments, including deployment of OpenTelemetry collector, Grafana Tempo, Kube Prometheus stack, and exploration of OpenLIT/Langfuse for LLM monitoring, and addressed critical performance issues such as OOMKilled by implementing embeddings infinity resizing.
- Orchestrated a multi-cloud migration strategy to Azure, encompassing AKS cluster setup, Azure Cache for Redis, Application Gateway, centralized firewall, and private endpoint connections for Azure OpenAI services, maintaining service continuity and facilitating large-scale data transfers for embeddings and code sandbox.
- Architected robust CI/CD and GitOps workflow automation using ArgoCD, standardizing deployment processes, enabling automatic image updates, and implementing continuous patching of ACR images and AKS host encryption, significantly reducing manual intervention and improving security posture.
- Led Azure production readiness initiatives, implementing comprehensive security hardening measures including WAF integration, NSG configurations, and managing Azure AKS backup for dev and production clusters, ensuring high availability and secure operations.
- Worked on JupyterHub project for Brevan Howard

DevOps Engineer, 07/2022 - 04/2023
WorkHall – Bengaluru, India

- Collaborated on migration to AWS cloud infrastructure from on-premises, resulting in 40% reduction in infrastructure management costs and 30% improvement in system performance and scalability.
- Developed and deployed infrastructure for EKS clusters using Terraform, cutting provisioning time from 4 hours to 2 hours per cluster.
- Created and managed CI/CD pipelines with GitHub Actions, reducing deployment time by 20% and increasing deployment frequency from 10 to 17 times per week.
- Implemented Istio service mesh for EKS clusters to enhance security through mTLS, resulting in 50% reduction in security breaches and incidents.
- Automated CD pipeline using GitOps with ArgoCD, saving developers time of 20 minutes per build.
- Employed HashiCorp Vault for secrets management, increasing security and reducing vulnerabilities by 20%.

Software Engineer, 05/2018 - 06/2022
WNS-Vuram – Chennai, India

- Overcame scalability hurdles to enable donations exceeding 1 crore, introducing real-time tracking features that increased donation efficiency by 30%.
- Administered shell scripting for database migration which reduces manual effort by more than 50%.
- Incorporated real-time donation tracking and push notifications into Humane platform mobile apps, resulting in 50% increase in app downloads and 100 surge in active users.
- Applied code splitting and asset compression techniques, reducing application size from 15 MB to 5 MB.

EDUCATION

MSc: Computing and Technology, 01/2024

Northumbria University - London

Modules: Information Governance and Cyber Security (1st), Database and Analytics Principles(1st).

SKILLS

- **Cloud Platforms & Infrastructure as Code (IaC):** AWS, Azure, Terraform, CloudFormation

- **CI/CD & Automation:** GitHub Actions, Jenkins, Automated Pipelines

- **AI/MLOps Infrastructure:** Deployment of AI services/models, MLOps pipelines, LLM-specific monitoring, Embeddings management

- **Programming & Scripting:** Python, Javascript, Shell Scripting,

- **Containerization & Orchestration:** Docker, Kubernetes (EKS, AKS), ArgoCD, GitOps

- **Observability & Monitoring:** OpenTelemetry, Prometheus, Grafana, Loki, Fluentbit, ELK, AWS CloudWatch, LLM Monitoring (OpenLIT, Langfuse)

- **Security & Networking:** WAF, NSG, Private Endpoints, mTLS (Istio), Secrets Management (HashiCorp Vault), Centralized Firewall, Azure AKS Backup

CERTIFICATIONS

- AWS Solutions Architect Associate C03
- Certified Kubernetes Administrator 2024

GITHUB PROJECTS

NL2KQL AI Agent: Developed a Natural Language to KQL (NL2KQL) AI agent that converts natural language queries into KQL, authenticates with Azure, executes queries, and retrieves results. (github.com/asttle/nl2kql)