#### MUHAMMED ADEEM SHAIK

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#### PROFESSIONAL EXPERIENCE

#### Site Reliability Engineer, Apple, Seattle

May 2023 - Present

- Tech Stack: Kubernetes, Docker, Terraform, Datadog, Splunk, AWS, GCP, Python, Go, Kafka, Spark, Flux, Crossplane, Helm
- Architected and maintained a highly scalable, multi-tenant Data platform supporting critical Apple services including Maps, Search, and Siri, ensuring 99.99% uptime and optimal performance
- Implemented and optimized Kubernetes-based infrastructure for AI/ML workloads, enhancing reliability and efficiency of data processing pipelines
- Designed a comprehensive observability solution using Datadog and Splunk, enabling real-time monitoring and alerting for systems processing over 1 petabyte of data daily
- Developed automated disaster recovery and failover systems for a high-throughput streaming platform handling up to 1 trillion events daily
- Led GitOps implementation and CI/CD pipeline optimization, reducing deployment times by 60% and increasing release
- Optimized resource utilization in hybrid cloud environments, resulting in a 30% reduction in infrastructure costs while maintaining performance standards

### Site Reliability Engineer, Deloitte, Bengaluru, India

August 2019 - July 2021

- Tech Stack: Kubernetes, Envoy, gRPC, Prometheus, Grafana, Jaeger, Terraform, Go, Python, AWS, GCP
- Led DevOps initiatives to modernize the supply chain management platform for a global Fortune 500 consumer goods company, increasing transaction processing capacity to handle millions of daily transactions across 150+ countries, thereby enhancing global market responsiveness and operational efficiency.
- Designed and deployed a multi-region Kubernetes infrastructure to support microservices, achieving 100K+ requests per second while maintaining 99.99% uptime, significantly boosting the company's service reliability and customer satisfaction.
- Developed and implemented a distributed tracing solution using OpenTelemetry and Jaeger, which reduced p99 latency by 40%, dramatically improving the responsiveness and efficiency of service interactions.
- Engineered advanced traffic management solutions using Envoy, enhancing service mesh performance and enabling dynamic deployment strategies, which led to a 15% increase in deployment efficiency.
- Directed the strategic shift from REST to gRPC for essential service communications, achieving a 30% reduction in bandwidth usage and enhancing system resilience under peak loads.
- Implemented and standardized Terraform-based infrastructure-as-code practices across AWS and GCP platforms, ensuring 100% consistency and speeding up environment provisioning by 25%.

### **PROJECTS**

### Log File Monitoring and Alert System

AWS(EKS, EMR, SNS, ECR), Apache(Spark, Kafka)

- Designed and Developed an cloud architecture which uses a log file generator application deployed onto an AWS Elastic Kubernetes cluster to write logs into AWS Elasticache Redis Database.
- Utilized the AKKA actor system's ability to continuously monitor database and forward errors to a Kafka Topic and used an AWS EMR Spark Cluster to stream logs from the topic to alert stakeholders.

# **Aviation Data Pipeline**

GCP(GCS, Big Query, Data Studio, Wrangler), Python, Docker, Airflow

• Built an end-end data engineering pipeline to analyze the aviation data of individual airline, airline sectors and industry as a whole. Created an ETL pipeline using Data Fusion(GCP)to visualize the data from airline API using kafka and batch processing.

## AzureFlow

Azure(DevOps), Terraform, Jenkins, Python, Bash

• Developed an efficient Azure cloud infrastructure for large-scale research data management. Also, automated a CI/CD pipeline with Azure DevOps, Terraform, and Jenkins for optimized software builds, tests, and deployments.

## **SKILLS**

Languages & Frameworks Python, Go, Java, Bash, Terraform

Data Processing & Analytics Apache (Spark, Kafka, Airflow), Prometheus, Grafana

Cloud & Big Data AWS, GCP, Docker, Kubernetes, Helm, Crossplane

Data Visualization Datadog, Splunk, Grafana, Tableau, Power BI

**DevOps & Infrastructure** Envoy, OpenTelemetry, Jaeger, gRPC, GitOps, CI/CD Pipelines

### **EDUCATION**

Masters in Computer Science - University Of Illinois Chicago, Illinois PG Diploma in Data Science - IIIT Bangalore, India Bachelors in Computer Applications - Bangalore University, India

🛗 Aug 2021 - May 2023 ∰ Jan 2020 - Jan 2021 May 2016 - June 2019