SYED HUZAIFA BIN AFZAL

Master Base Resume | AI Engineering | DevOps | Cloud Infrastructure | SRE | Security

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Purpose: Detailed master resume for tailoring AI Engineer, AI DevOps, DevOps, SRE, Cloud Infrastructure, Platform Engineering, AI Security, and Cloud Architect applications. This file is intentionally more detailed than a final one- or two-page submission resume.

PROFESSIONAL SUMMARY

DevOps, cloud infrastructure, and AI security professional with 6+ years of experience building secure, automated, reliable, and cost-efficient cloud platforms for enterprise and SaaS environments. Strong production background in AWS infrastructure, Terraform-based infrastructure as code, CI/CD automation, observability, incident response, disaster recovery, cloud cost optimization, IAM/RBAC/SSO access control, and developer-enabling platform practices. Currently completing a Master of Cybersecurity & Leadership at the University of Washington, expected June 2026, with applied research in secure enterprise generative AI, AI governance, data residency, role-based access control, model control, and responsible GenAI adoption. Strong communicator with UW reporting experience covering campus IT and AI, including executive interviews, podcast conversations with executives, and public-facing writing on UW AI initiatives.

TARGET ROLE FAMILIES

- AI Engineer, AI Infrastructure Engineer, AI DevOps Engineer, MLOps-adjacent Platform Engineer, AI Security Engineer, and Secure GenAI Platform Engineer.
- DevOps Engineer, Senior DevOps Engineer, Site Reliability Engineer, Cloud Infrastructure Engineer, Platform Engineer, Infrastructure Engineer, and Cloud Architect.
- Best-fit themes: secure cloud platforms, AI platform deployment, infrastructure automation, observability, reliability, developer tooling, responsible AI governance, and cloud cost optimization.

CORE TECHNICAL SKILLS

Cloud Platforms: AWS primary production experience; Azure working knowledge; GCP working knowledge; Oracle Cloud Infrastructure; multi-cloud architecture concepts.

AWS Services: EC2, S3, RDS, Lambda, API Gateway, CloudFront, Route 53, ECS, ECR, Fargate, ALB, VPC, IAM, Systems Manager, CloudWatch, SNS, SES, DynamoDB, EBS, WorkSpaces, EMR, OpenSearch/Elasticsearch, ElastiCache, Redshift, Trusted Advisor, Cost Optimization Hub.

Infrastructure as Code: Terraform, CloudFormation, modular IaC design, reusable infrastructure modules, Terraform state handling, environment standardization, IaC design reviews, AWS Well-Architected practices.

Containers & Orchestration: Docker, Docker Compose, Kubernetes exposure, ECS, EKS exposure, containerized deployments, service discovery, ALB-based routing, microservices support, Istio/service mesh exposure.

CI/CD & Release Automation: Jenkins, GitLab CI/CD, GitHub Actions, Git, Bitbucket, deployment pipelines, release workflows, rollback planning, post-deployment validation, build/deploy automation, developer workflow improvement.

Observability & Reliability: CloudWatch, Datadog, OpenSearch, Prometheus/Grafana exposure, monitoring, alerting, dashboards, incident triage, production troubleshooting, SRE visibility, runbooks, disaster recovery, multi-region readiness.

Security & Compliance: IAM, RBAC, SSO, least privilege, access control design, AWS Systems Manager session access, secrets management concepts, encryption concepts, vulnerability management concepts, secure software delivery, auditability, SOC 2/HIPAA concepts, NIST AI RMF, ISO/IEC 27001:2022 control mapping.

AI / LLM Infrastructure: Secure LLM deployment, Ollama, Open WebUI, Docker-based AI platforms, local inference, model allow-listing, model versioning concepts, role-based AI platform administration, AI governance, Shadow AI risk analysis, enterprise data residency.

Programming & Scripting: Python, Bash, PowerShell, JavaScript, C/C++, Groovy, SQL/analytics exposure through Redshift/Superset work, shell scripting, automation utilities.

Data & Analytics Infrastructure: AWS EMR, Hadoop/HDP migration exposure, Spark-as-a-Service architecture, S3 Inventory, Redshift, Superset, data lake migration support, infrastructure analytics, cost/usage reporting.

Collaboration & Tools: Jira, Confluence, Slack, ServiceNow, Agile/Scrum, technical documentation, runbooks, executive communication, stakeholder interviews, mentoring, training, cross-functional collaboration.

PROFESSIONAL EXPERIENCE

DevOps Engineer | Harri - contracted by Kalam 4 Solutions | *March 2022 - May 2025*

Production AWS platform supporting enterprise SaaS customers in workforce-management technology.

- Designed, built, and maintained production AWS infrastructure with a focus on automation, reliability, security, scalability, cost efficiency, and developer enablement.
- Designed and shipped reusable Terraform modules for AWS services including API Gateway, CloudFront, Route 53, OpenSearch, and Redshift, reducing environment provisioning time by about 40% and improving infrastructure consistency across environments.
- Managed AWS infrastructure as code across multiple services, supporting repeatable deployments, safer infrastructure changes, and improved operational control.
- Worked on Terraform refactoring, modular IaC design, code/design reviews, and infrastructure standardization to support platform engineering practices.

- Hardened security and access posture by implementing IAM/RBAC and SSO patterns, refining least-privilege boundaries, and centralizing operational access through AWS Systems Manager.
- Improved cloud cost visibility and optimization using AWS Trusted Advisor, AWS Cost Optimization Hub, Reserved Instance planning, rightsizing, and FinOps practices, reducing AWS spend by about 30%.
- Designed and maintained Reserved Instance renewal and utilization cycles, helping engineering and finance stakeholders plan cloud usage more effectively.
- Strengthened disaster recovery and multi-region readiness through Redis upgrades, OpenSearch cross-cluster replication, DR runbook improvements, and service-level recovery planning.
- Worked on multi-region disaster recovery planning across compute, network, and data layers; supported multi-region approaches for services such as OpenSearch/Elasticsearch, ElastiCache, RDS, and S3 using Terraform-based automation.
- Built an infrastructure analytics pipeline using S3 Inventory, Redshift, and Superset to give SRE and engineering teams visibility into storage usage, growth patterns, cost attribution, and optimization opportunities.
- Improved CI/CD and developer velocity by refactoring deployment workflows, removing unreliable steps, and standardizing release processes with stronger operational controls.
- Supported production reliability through monitoring improvements, infrastructure investigations, incident follow-up, and documentation of repeatable operational processes.
- Participated in architecture and design discussions focused on cloud scalability, reliability, secure access, performance, and cost tradeoffs.
- Contributed to AWS Well-Architected-style reviews and infrastructure improvement work for production environments.
- Mentored peers, trained interns and engineers on DevOps tooling and Harri infrastructure patterns, and promoted practical automation and cloud best practices.
- Recognition: Top Performer in 2023 and 2024. Earned AWS Certified Solutions Architect - Associate during tenure.

Cloud Infrastructure / Software Engineer | **Visionet Systems - contracted by Systems Limited** | *July 2019 - March 2022*

Cloud operations, DevOps automation, and client-facing AWS infrastructure work for enterprise customers including Regeneron Pharmaceuticals.

- Automated AWS cloud operations using Systems Manager, Lambda, Python, Bash, PowerShell, and AWS CLI for patching, scheduling, post-deployment validation, and routine environment maintenance.
- Built and maintained Jenkins CI/CD pipelines using shell scripting, Groovy, Python, and AWS CLI, improving deployment consistency, release traceability, and operational control.
- Automated AWS EMR on EC2 Terraform deployments through Jenkins forms, allowing end users to provision clusters with required supporting resources such as S3 and deployment metadata.
- Created Jenkins deployment and destruction pipelines for EMR infrastructure, including Terraform state retrieval from S3, validation of Jenkins user and AWS tags, and automated cleanup of provisioned resources.
- Converted Jenkins parameters to Terraform environment variables through shell scripting, improving reliability of end-user-driven infrastructure provisioning workflows.
- Sent automated deployment completion emails to end users with EMR cluster details such as cluster name, cluster ID, logs, and S3 resource information.
- Supported Spark-as-a-Service migration work from EC2/Hortonworks Data Platform to AWS EMR, using Terraform to make infrastructure easier to deploy, manage, and scale.
- Helped customers improve autoscaling and reduce infrastructure cost by moving big-data Spark workloads from fixed EC2-based clusters toward AWS EMR-based architecture.
- Supported application modernization by migrating an application from EC2-based deployment toward containerized microservices using Docker, ECS, ECR, Fargate, ALB, Route 53, CloudWatch, and Terraform.
- Used AWS Route 53 service discovery and ALB routing patterns to support internal service communication and external traffic flow for containerized workloads.
- Acted as Cloud Engineer for offshore cloud operations, supporting AWS resource provisioning, tagging compliance, patching, scheduling, reporting, and incident/request tracking through ServiceNow.
- Integrated CloudWatch and Datadog monitoring across cloud-hosted applications, improving observability, alerting, and incident triage for operations teams.
- Developed AWS Systems Manager documents and automation scripts for EC2 post-deployment steps, reducing manual effort for server build validation and required software installation.
- Worked directly with international client teams in Agile/DevOps environments to gather requirements, present progress, explain technical tradeoffs, and deliver cloud automation improvements.
- Supported high-availability enterprise workloads through runbooks, scripted remediation, patching automation, post-deployment checks, and cross-functional coordination.
- Mentored junior engineers on cloud automation, CI/CD, scripting, monitoring, and secure operational practices.
- Recognition: Best Team Award, Cloud Services, Systems Limited, 2020.

Part-Time Student News Reporter | **University of Washington** | *September 18, 2025 - Present*

Campus reporting role covering UW community, IT, AI, student life, and university initiatives.

- Cover campus news, student life, and developments in IT and AI affecting the University of Washington community.
- Interview university stakeholders and executives, including podcast-style conversations with executives, translating complex institutional and technology topics into clear public-facing stories.
- Wrote an article for The Tacoma Ledger on UW Purple and student collaboration with UW-IT to shape next-generation AI tools for the university community.
- Attend UW Purple Monthly Training over Teams and participate in the UW AI Community of Practice, strengthening understanding of UW AI adoption, culture, and responsible AI discussions.
- Build executive communication, storytelling, deadline-driven writing, interviewing, and audience-aware technical communication skills.

SELECTED AI, SECURITY, AND PLATFORM PROJECTS

Secure Enterprise Generative AI Platform - GovernAI | University of Washington | *June 2025 - Present*

Applied research and implementation project focused on secure, governed enterprise GenAI adoption.

- Co-authored "Are You Aware of Shadow AI? GovernAI for Addressing Emerging Risks," accepted to the IEEE Silicon Valley Cybersecurity Conference 2026.
- Designed GovernAI, a layered enterprise generative AI architecture built on Open WebUI, Ollama, Docker, and Windows Server to support sanctioned AI use, local deployment, and controlled data residency.
- Implemented a three-role RBAC model for Standard User, AI Platform Admin, and System Administrator functions, supporting separation of duties and controlled AI platform administration.
- Evaluated security and operational risk across model control, admin observability, storage persistence, outbound network behavior, access control, and data locality.
- Conducted a 70-respondent workplace AI survey across public and private sector users; 71% reported using unsanctioned public AI tools at work, while 97% indicated they would use a governed organization-provided alternative.
- Validated security properties through host-based firewall rules and Wireshark traffic analysis, confirming expected local platform behavior and no unintended outbound communication during normal operation.
- Benchmarked the platform against ChatGPT, Microsoft 365 Copilot, and Gemini Pro across drafting, summarization, and code-generation workflows.
- Mapped implemented controls to NIST AI Risk Management Framework and ISO/IEC 27001:2022 Annex A concepts, connecting technical AI controls to governance requirements.
- Produced practical hardening guidance for enterprise LLM deployments, including model allow-listing, access separation, storage persistence, admin visibility, and network behavior monitoring.

Infrastructure Analytics and Cost Visibility Platform | Harri | *2024 - 2025*

- Integrated S3 Inventory, Redshift, and Superset to surface AWS storage usage, growth patterns, and cost-attribution insights for SRE and engineering teams.
- Created visibility that helped infrastructure stakeholders identify optimization opportunities and make better cost/performance decisions.

Spark-as-a-Service AWS EMR Automation | Regeneron Pharmaceuticals engagement | *2019 - 2022*

- Built Terraform and Jenkins-based automation for AWS EMR deployment and destruction, supporting end-user-driven provisioning of big-data infrastructure.
- Supported migration analysis from EC2/HDP Spark infrastructure to AWS EMR, helping improve autoscaling, manageability, and cost profile for Spark workloads.

Application Modernization to Containerized Architecture | UpBrainery PoC | *2019 - 2022*

- Migrated application infrastructure from EC2-based deployment toward Docker/ECS-based containerized architecture using ECR, ECS, Fargate, ALB, Route 53, CloudWatch, and Terraform.
- Supported microservices-style deployment patterns, autoscaling, networking, service discovery, and infrastructure-as-code standardization.

SELECTED EARLIER EXPERIENCE

Blockchain / Cryptocurrency Intern | Microsoft Redmond Campus - remote internship | *Summer 2018*

- Completed a three-month internship focused on blockchain concepts and deployment of a private Stellar (XLM) cryptocurrency network under Microsoft technical supervision.
- Built foundational exposure to distributed ledger systems, networked services, and emerging technology evaluation.

Lead Web Developer / Consultant | Festoon Engineering Works | *Summer 2017*

- Gathered requirements, designed the UX/UI, and deployed the company website using JavaScript, HTML, CSS, and cPanel.
- Built early client-facing experience in requirements gathering, web delivery, and stakeholder communication.

LifeTrack Android Application - Final Year Project | GIK Institute | *2019*

- Developed and supported an Android application using Android Studio and Java that helped users monitor, track, and collaborate with others.
- Completed the project using Agile methodology and achieved 1st position in final year project evaluation.

PUBLICATIONS, ARTICLES, AND PUBLIC COMMUNICATION

- IEEE SVCC 2026 accepted paper: "Are You Aware of Shadow AI? GovernAI for Addressing Emerging Risks" - co-authored with Afzal, Bowman, Chian, Singh, and Fan (advisor).
- The Tacoma Ledger article: "Building the Future with AI Purple: UW students join forces with UW-IT to shape next-gen AI." URL: https://thetacomaledger.com/2025/10/13/building-the-future-with-ai-purple-uw-students-join-forces-with-uw-it-to-shape-next-gen-ai/
- Podcast / executive conversation experience: https://www.youtube.com/watch?v=oWbC9R_lV2s
- UW AI engagement: UW Purple Monthly Training participant and UW AI Community of Practice member.

EDUCATION

Master of Cybersecurity & Leadership | **University of Washington** | *Expected June 2026*

GPA: 3.99 | Beta Gamma Sigma Business Honor Society | Upsilon Pi Epsilon Honor Society

- Coursework and applied work emphasize cybersecurity leadership, AI governance, secure software delivery, risk management, vulnerability management concepts, and enterprise security strategy.
- Applied research focus: secure enterprise generative AI deployment, Shadow AI, governance frameworks, access control, data residency, and responsible AI adoption.

Bachelor of Science in Computer Science | **Ghulam Ishaq Khan Institute of Engineering Sciences and Technology** | *2015 - 2019*

Minor: Mathematics

CERTIFICATIONS AND TRAINING

- AWS Certified Solutions Architect - Associate, issued October 2023, expires October 2026.
- Oracle Cloud Infrastructure Architect Professional, originally issued 2020; Oracle Cloud Infrastructure Architect Associate, Developer Associate, and Foundations Associate, originally issued 2020.
- Foundations for Cybersecurity Analytics - University of Washington.
- DevOps Foundations - LinkedIn Learning.
- Actively interested in Azure AI / Azure DevOps certification path for AI platform and Azure-centered infrastructure roles.

HONORS AND RECOGNITION

- Top Performer - Harri, 2023 and 2024.
- Best Team Award - Cloud Services, Systems Limited, 2020.
- Beta Gamma Sigma Business Honor Society Member.
- Upsilon Pi Epsilon Honor Society Member.
- 1st position in Final Year Project at GIK Institute.
- High Achiever scholarship in A-Level and High Achiever recognition in O-Level.

KEYWORD BANK FOR TAILORING

AI Engineer, AI DevOps, AI Infrastructure, MLOps, secure LLM deployment, AI governance, Shadow AI, responsible AI, NIST AI RMF, ISO 27001, model governance, Open WebUI, Ollama, Docker, Kubernetes, AWS, Azure, GCP, Terraform, CloudFormation, CI/CD, Jenkins, GitHub Actions, GitLab CI/CD, SRE, observability, Datadog, CloudWatch, Prometheus, Grafana, incident response, runbooks, disaster recovery, multi-region, IAM, RBAC, SSO, least privilege, secrets management, vulnerability management, secure software delivery, Python, Bash, PowerShell, JavaScript, cloud cost optimization, FinOps, AWS Trusted Advisor, Cost Optimization Hub, Reserved Instances, Redshift, OpenSearch, EMR, ECS, ECR, Fargate, API Gateway, CloudFront, Route 53, RDS, S3, Lambda, Systems Manager, developer tooling, platform engineering, executive communication, stakeholder communication, technical writing.