NAGA VENKATA MUKESH LAKKOJU

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PROFESSIONAL SUMMARY

Results-oriented Cloud Engineer with hands-on experience designing, automating, and managing scalable, secure, and cost-efficient infrastructures across AWS, Azure, and GCP. Proficient in implementing Infrastructure as Code (Terraform, CloudFormation), building CI/CD pipelines (Jenkins, GitHub Actions), and deploying containerized applications using Docker and Kubernetes (EKS). Skilled in cloud migration, performance optimization, monitoring (CloudWatch, Prometheus, Grafana), and cloud cost management. Adept at integrating DevOps practices to enhance deployment speed, system reliability, and operational efficiency. Certified in AWS Solutions Architect -Associate, Cloud Practitioner, and Azure Fundamentals, with proven success in improving uptime, security posture, and infrastructure scalability across multi-cloud environments.

TECHNICAL SKILLS

Cloud & Platform Engineering: AWS (EC2, S3, RDS, Lambda, VPC, CloudFormation, CloudWatch, IAM),Azure (Virtual Machines, Storage Accounts, Monitor, Resource Groups),GCP (Compute Engine, Cloud Storage, IAM, Cloud Functions),Cloud Architecture Fundamentals, Backup & Disaster Recovery, Cloud Cost Optimization.

DevOps, CI/CD & Automation: Jenkins, GitHub Actions, Terraform, Ansible, Bash, Python (Automation Scripts),Infrastructure as Code (IaC), Continuous Integration/Continuous Deployment (CI/CD), Configuration Management, GitOps Fundamentals.

Containerization & Orchestration: Docker, Kubernetes (EKS Basics), Helm Charts (Beginner), Rolling Deployments, Autoscaling Concepts, Container Networking & Security.

Monitoring, Observability & Incident Management: AWS CloudWatch, Prometheus, Grafana, ELK Stack (Basics),Logging, Alerting, Metrics Visualization, Performance Monitoring.

Security, Compliance & Governance: IAM (Users, Roles, Policies), AWS Config, CloudTrail, Secrets Manager, MFA Setup,Encryption at Rest/In-Transit, Security Groups, Basic DevSecOps Concepts.

Networking & Systems: Linux (Ubuntu, Amazon Linux), Windows Server (Basics), DNS, Load Balancers, VPN, Firewalls, Subnets, Route53.

Data & Analytics Integration: PostgreSQL, MySQL, ETL Basics, Data Backup & Migration, AWS S3 Integration with BI Tools (Power BI, Tableau).

Collaboration & Source Control: Git, GitHub, GitLab, Bitbucket, Jira, Agile/Scrum Methodologies, SDLC, Confluence.

PROFESSIONAL EXPERIENCE

Cloud Engineer **Aug 2025 - Present**

Bright Mind Enrichment & Schooling | Remote

- Automated 15+ ETL pipelines using Python, SQL, and Apache Airflow, integrating tutoring, donation, and outreach data streams, reducing data consolidation time by 60% and improving delivery speed for analytics dashboards.
- Designed a PostgreSQL data warehouse on AWS S3, unifying 5+ disparate data sources and establishing a single, versioned data repository with fine-grained IAM-based access control.
- Engineered data validation and cleansing scripts using Pandas and SQLAlchemy, improving dataset accuracy by 40% and reducing report errors by 75%.
- Developed Power BI and Tableau dashboards to monitor program metrics (attendance, donor activity, volunteer engagement), enabling leadership to track real-time KPIs and drive 20% efficiency gains.
- Integrated Python-based predictive models forecasting donor inflows and retention with 85% accuracy, optimizing outreach planning and improving participant retention by 15%.
- Automated data pipeline deployment via Jenkins and Terraform, ensuring consistent infrastructure provisioning across development and production environments.
- Enhanced pipeline observability using Prometheus and Grafana, cutting MTTR by 25% and improving system reliability for data workflows.
- Implemented S3 lifecycle policies and Athena-based querying, reducing storage cost by 18% while retaining analytical capabilities.

AWS Cloud Admin **Jun 2022 - Aug 2023**

Tata Consultancy Services| Client:Supreme VF Corp | Hyderabad , India

- Built and supported secure, high-availability AWS infrastructures using EC2, S3, VPC, and Route53, enabling uninterrupted access for global users and improving uptime reliability to 99.9%.
- Automated provisioning and deployment using CloudFormation and AWS CodePipeline, reducing manual intervention across environments and accelerating feature rollout by 30%.
- Strengthened identity and access management through granular IAM policies, MFA enforcement, and role-based access control, reducing unauthorized access incidents by 40%.
- Configured and optimized RDS instances with automated backups, snapshots, and AWS Backup schedules, improving disaster recovery readiness and cutting recovery time by 35%.
- Enhanced system observability by integrating CloudWatch metrics and CloudTrail logs, which improved proactive issue detection and reduced average response time during incidents.
- Optimized EC2 compute resources with insights from AWS Compute Optimizer and performance monitoring, lowering monthly cloud spend by 15% without sacrificing workload efficiency.
- Managed security group configurations, bastion host access, and network ACLs to maintain a secure multi-tier architecture that aligned with organizational security benchmarks.
- Performed routine Windows and Linux server administration, including patching, log reviews, and backup validation, ensuring environment stability and compliance with IT governance standards.

. **Cloud Engineer**

Tata Consultancy Services | Client:NXP | Hyderabad , India

- Designed and deployed secure AWS cloud environments using VPC, EC2, and S3 with automated provisioning through CloudFormation, which improved deployment efficiency and reduced infrastructure setup time by 35%.
- Architected high-availability solutions by configuring Auto Scaling groups, load balancers, and Route53 routing policies, ensuring seamless traffic distribution and maintaining 99.9% application uptime.
- Implemented automated EBS snapshot and AMI backup strategies with retention handling, minimizing manual recovery efforts and achieving a 45% faster recovery during failover events.
- Strengthened access security by refining IAM roles and enforcing least-privilege principles with MFA, which reduced policy violations and audit risks by over 30%.

- Optimized performance monitoring through CloudWatch custom metrics and CloudTrail insights, enabling proactive resource scaling and cutting incident response times by 25%.
- Streamlined version control and deployment workflows using Git and CI/CD pipelines, which reduced release cycle durations and improved deployment consistency across environments.
- Coordinated with cross-functional teams to evaluate system bottlenecks and fine-tune EC2 instance types, leading to a 20% reduction in monthly compute costs without impacting performance.
- Administered user management and group policies via Active Directory and IAM, standardizing access governance across AWS and on-prem environments while improving operational compliance.

DevOps Engineer Intern **Apr 2021 - May 2021**

Verzeo | Bengaluru, India (Remote)

- Automated the end-to-end ML model deployment pipeline using Docker and AWS EC2, reducing manual setup time by 40% and enabling continuous integration of model updates through scripted build processes.
- Implemented CI/CD workflows in GitHub Actions to streamline code testing, container builds, and API rollouts, resulting in 30% faster deployments with zero downtime during production updates.
- Configured monitoring dashboards using CloudWatch and Prometheus to track system health, latency, and model drift, improving issue detection and reducing response time by 25%.
- Orchestrated model containerization with Docker Compose, ensuring consistent environments across staging and production, which minimized environment-specific errors and simplified scalability testing.
- Managed version control and data synchronization using Git and DVC (Data Version Control), allowing efficient tracking of model iterations and enhancing team collaboration on dataset changes.
- Integrated Flask-based API endpoints with AWS Lambda triggers, automating post-deployment validation and improving real-time prediction handling across distributed environments.

Cloud & DevOps Intern **Mar 2021 - Apr 2021**

The Sparks Foundation | Remote

- Automated the deployment of machine learning services using Docker and AWS EC2, enabling containerized delivery of analytics models and improving environment consistency by 35%.
- Designed CI/CD pipelines with GitHub Actions and Jenkins to streamline code integration, testing, and deployment, cutting manual release efforts and reducing deployment time by 40%.
- Configured AWS S3 and RDS for secure data storage and retrieval, enhancing data availability and improving processing efficiency across multiple analytics workflows.
- Provisioned and managed infrastructure using Terraform, creating reusable IaC templates that standardized deployment practices and reduced environment setup time by 25%.
- Deployed and tuned monitoring solutions with CloudWatch and Prometheus, allowing early anomaly detection and improving system reliability by 20%.
- Strengthened cloud security and compliance by implementing IAM policies, encryption standards, and access control mechanisms that safeguarded data assets and maintained audit readiness.

PROJECTS

Cloud Infrastructure Automation and Governance

- Streamlined infrastructure management by automating EC2 provisioning, AMI creation, and snapshot lifecycles through AWS CLI and CloudFormation, cutting manual setup efforts by 45%.
- Strengthened cloud security posture by implementing IAM roles, MFA enforcement, and granular access controls, improving audit readiness and minimizing identity-related risks.
- Enabled zero-downtime server patching across Linux and Windows instances using AWS Systems Manager Maintenance Windows, ensuring compliance and uninterrupted service delivery.

Cloud Performance Optimization and Monitoring Framework

- Enhanced operational efficiency by configuring CloudWatch alarms, Compute Optimizer insights, and SNS notifications to proactively address performance bottlenecks and reduce MTTR by 30%.
- Implemented cost-optimization strategies through EBS gp2-to-gp3 migration, EC2 right-sizing, and cleanup of unused resources, lowering cloud expenditure by 20%.
- Built a reliable multi-environment monitoring setup for Dev, QA, and Production using CloudWatch metrics and log groups, ensuring consistent visibility and service stability across workloads.

Cloud Operations Reliability and Cost Management

- Maintained high system reliability by configuring load balancers, autoscaling policies, and Route53 records for multi-AZ deployment, achieving 99.9% service uptime.
- Secured data workflows by enabling S3 encryption, blocking public access, and applying TLS configurations, ensuring compliance with global security standards.
- Optimized DevOps operations by automating patching, EBS encryption, and system cleanup using SSM and CloudFormation, reducing maintenance efforts and improving resource utilization.

EDUCATION

Master of Science in Information Systems **Aug 2023 - May 2025**

Stevens Institute of Technology | Hoboken, NJ

Bachelor of Technology in Computer Science and Engineering **Jul 2018 - May 2022**

Karunya Institute of Technology and Sciences | Tamil Nadu, India

CERTIFICATIONS

- AWS Certified Solutions Architect Associate - **Amazon Web Services**
- AWS Certified Cloud Practitioner - **Amazon Web Services**
- Microsoft Azure Fundamentals - **Microsoft**
- Introduction to Cybersecurity - **Cisco Networking Academy**
- DevOps Foundations: Continuous Delivery & Automation - **LinkedIn**
- Learning Kubernetes for Cloud Engineers - **Coursera**
- Infrastructure Automation with Terraform - **LinkedIn Learning**