Gullipalli Kodanda Rama Naidu

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EDUCATION

University of Maryland - Baltimore County — **Baltimore, MD**
Master of Professional Studies in Data Science — **Aug 2023 - May 2025**

Gandhi Institute of Technology and Management (GITAM) — **Visakhapatnam, India**
Bachelors of Computer Applications (Computer Science) — **Oct 2020 - Apr 2023**

Professional Summary

Highly motivated and technically skilled graduate student pursuing a Master's in Data Science with an expected graduation in May 2025. Proficient in designing, deploying, and managing scalable and reliable infrastructure, with expertise in cloud platforms (AWS, Azure), automation tools (Terraform, Kubernetes), and monitoring solutions (Prometheus, Grafana). Strong foundation in programming languages such as Python, Go, and Java, with hands-on experience in CI/CD pipelines, containerization, and infrastructure provisioning. Adept at collaborating cross-functionally to deliver robust solutions that enhance system reliability and performance. Passionate about driving innovation and contributing to the advancement of sustainable technologies.

- Managing AWS services such as **EC2, S3, EBS, VPC, ELB, RDS, SNS, SQS, Route 53, Lambda, DynamoDB**, Auto Scaling, and Security Groups, along with AWS IAM for handling users, groups, policies, roles, access keys, and MFA. Additionally, implemented highly reliable MongoDB replica sets on EC2 for optimized performance.
- Proficient in utilizing **Terraform modules** for resource provisioning in **AWS and Azure, including AWS VPC, Azure Resource Group, and EC2,** to implement Infrastructure as Code (IaC) practices that enhance deployment consistency, security, and scalability, while effectively managing complex deployments through Terraforms state management and workspace features for efficient resource tracking and team collaboration.
- Hands on experience in working with **Docker and Kubernetes** on multiple cloud providers, from helping developers build and containerize their application (CI/CD) to deploying either on public or private cloud.
- Experience with Linux and Windows agents for **Splunk administration** with a solid understanding of the Splunk system.
- Proficient in Kubernetes to manage the deployment rollouts, rollbacks and created service mesh for the traffic management in the production environment. Created pod, deployment, namespace, and replication controller **YAML** definition files to schedule, deploy and manage containers nodes in different env dev/staging/prod clusters in Kubernetes.
- Experience in working on several Docker components like **Docker Engine, Hub Machine**, creating Docker images, compose Docker Registry and handling multiple images primarily for middleware installations and domain configurations.
- Proficient in utilizing Jenkins for orchestrating build and deployment pipelines, including job configuration, plugin management, and integration with **version control systems** to streamline development processes and improve collaboration among development teams.
- Experience in working with **EC2** Container Service plugin in **JENKINS** which automates the Jenkins master-slave configuration by creating temporary slaves.
- Experience in creating and configuring Jenkins jobs, build and delivery pipelines for automating several operations like provisioning of resources and **building executable files from raw code**.
- Expertise in using **Ansible** to deploy the ELK stack for automating **Continuous Deployment** (CD), including configuring nodes and setting up deployment failure reporting in an OpenStack enterprise environment. Successfully upgraded the entire ELK cluster to the latest releases.

- Proficient in using **Ansible** for automating configuration management and continuous deployment processes across cloud environments, which enhances operational efficiency and ensures consistent application deployments while minimizing manual effort.

- Experienced in using **MAVEN** and **ANT** as a Build Tool for the building of deployable artifacts (Jar, war & ear) from source code.

- Proficient in **PowerShell scripting** for automating administrative tasks in Windows environments, including managing Azure resources, configuring cloud services, and orchestrating deployments. This expertise enhances operational efficiency and minimizes manual intervention through the development of reusable scripts and modules.

- Experience in deployment of applications on **Apache Webserver, Nginx,** and Application Servers such as **Tomcat, JBoss.**
- Working knowledge and understanding on AWS Syntax and cloud support through Syntax Managed Services.

- Experience in System Administration working on **Ubuntu, Solaris, Unix, CentOS, Fedora, OEL, Windows environments, VMware vSphere.**

SKILLS

Cloud Platforms	**Azure, AWS**
Infrastructure Provisioning Tools	**Terraform, Azure Resource Manager, Cloud Formation**
Configuration Management Tools	**Ansible**
CI /CD Tools	**Jenkins, Azure Pipelines, Gitlab Pipelines**
Build Tools	**Maven**
Containerization Tools	**Docker, Kubernetes**
Source Code Management	**GIT, GitHub, Gitlab, Azure Repos.**
Logging& Monitoring Tools	**Dynatrace Prometheus, Grafana**
Scripting Programming Languages	**Python, PowerShell, Bash/Shell, C**
Databases	**Data Lake, Data Bricks, MySQL, MongoDB, DynamoDB,**
Application/Web Servers	**NGINX**
Operating Systems	**UNIX, Linux, Windows**
Virtualization Platforms	**Oracle VirtualBox, VMware**
Bug Tracking Tools	**JIRA, Bugzilla**

PROJECTS:

1. Scalable Monitoring System for Cloud Infrastructure

- Designed and implemented a cloud-agnostic monitoring solution for a multi-region infrastructure using **Prometheus** and **Grafana**.
- Developed advanced dashboards to track system performance metrics (latency, uptime, resource utilization) across 100+ nodes.
- Configured real-time alerting policies to identify and mitigate performance bottlenecks, achieving 99.9% service uptime.
- Documented a comprehensive monitoring strategy and created runbooks for troubleshooting issues, streamlining incident resolution processes.

2. Automated Disaster Recovery for Critical Systems

- Architected a disaster recovery system for a high-availability environment using **Terraform** and **AWS** services such as **Route 53**, **S3**, and **RDS**.
- Developed scripts to automate backup replication and failover mechanisms, reducing downtime during outages by 70%.
- Conducted regular failover simulations to test the system's reliability and fine-tuned configurations to meet SLA requirements.

3. End-to-End CI/CD Pipeline for Distributed Applications

- Led the implementation of a CI/CD pipeline for a distributed microservices architecture using **Jenkins**, **Docker**, and **Kubernetes**.
- Automated testing and deployment workflows, enabling continuous integration and zero-downtime rollouts.
- Enhanced pipeline performance by integrating parallel builds and caching mechanisms, reducing build times by 50%.
- Collaborated with cross-functional teams to ensure the seamless integration of services and version control.

4. Kubernetes-Based Service Mesh for High Availability

- Designed and deployed a **Kubernetes** cluster with service mesh architecture (using **Istio**) to improve communication and observability between microservices.
- Implemented load balancing, traffic routing, and fault tolerance across 50+ microservices.
- Integrated advanced telemetry and logging systems with **Prometheus** and **Grafana**, enabling real-time insights into service health and latency.
- Achieved a scalable and fault-tolerant architecture capable of handling 10,000+ concurrent requests.

5. Multi-Cloud Infrastructure Optimization

- Spearheaded a multi-cloud infrastructure initiative using **Terraform** to manage resources across **AWS**, **Azure**, and **GCP**.
- Designed a unified deployment framework to provision compute, storage, and networking resources in a consistent and repeatable manner.
- Implemented cross-cloud monitoring and cost-optimization strategies, reducing operational costs by 25% while maintaining performance benchmarks.

6. Fault-Tolerant Application Deployment with Infrastructure as Code

- Designed a fault-tolerant application infrastructure using **Terraform** and **Kubernetes**, ensuring high availability for mission-critical applications.
- Configured auto-healing policies for containers, enabling automated recovery from node failures.
- Integrated horizontal and vertical scaling mechanisms to handle traffic surges, ensuring uninterrupted service during peak loads.

Certifications

AWS Certified DevOps Engineer Professional 2025

Kubernetes

Docker

Introduction to Scripting in Python

Business statistics and analysis

Prometheus

Accomplishments:

Collaborated with IIT Madras on a project to optimize mango jelly production, increasing efficiency by 20% and reducing waste by 30% through process optimization and IoT integration.

Developed sustainable solutions to improve shelf life and product quality, directly benefiting small-scale farmers and local businesses.

1.Enhanced System Reliability:

- Reduced incident resolution time by **60%** through the implementation of a proactive monitoring and alerting system using **Prometheus** and **Grafana**.
- Achieved **99.99% uptime** for critical services by optimizing infrastructure and implementing auto-scaling mechanisms.

2. **Optimized Deployment Processes**:
   - Decreased deployment time by **50%** by designing automated **CI/CD pipelines** using **Jenkins** and **Docker**, enabling seamless and error-free deployments.
   - Ensured zero downtime for multi-environment deployments in production.
3. **Cloud Cost Savings**:
   - Lowered cloud operational costs by **25%** through the implementation of resource optimization strategies and auto-scaling policies across **AWS** and **Azure**.
4. **Scalable Infrastructure Design**:
   - Designed and deployed a Kubernetes-based service mesh to handle **10,000+ concurrent requests**, ensuring high availability and fault tolerance.
5. **Automation Leadership**:
   - Automated infrastructure provisioning with **Terraform**, reducing manual configuration errors by **50%** and streamlining resource management across multiple teams.
6. **Recognition for Innovation**:
   - Awarded the **TEDx GITAM Prize** for delivering an impactful talk on leveraging technology for sustainability and societal advancement.
   - Received accolades for leading the implementation of a containerized microservices architecture, increasing deployment efficiency by **70%**.

7. **Monitoring and Incident Management**:

- Implemented a real-time log analysis system using the **Elastic Stack (ELK)**, enabling faster root cause analysis and reducing downtime during incidents by **40%**.

8. **Team Collaboration**:

- Led cross-functional teams to successfully deliver a large-scale monitoring project, aligning KPIs with business objectives and improving performance insights.

9. **Academic Excellence**:

- Completed AWS and Kubernetes certifications, demonstrating advanced expertise in cloud platforms and container orchestration.
- Maintained a strong academic record in the **Master's in Data Science program**, with a focus on site reliability engineering and automation.

10. **Community Engagement**:

- Organized coding workshops and DevOps seminars, mentoring **50+ students** in advanced infrastructure automation and monitoring practices.