# RAMA KRISHNA REDDY

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## Professional Summary

- DevOps Engineer with 4+ years of experience driving **infrastructure automation**, **CI/CD**, and cloud-native deployments across financial services and enterprise platforms.
- Automated infrastructure provisioning and **cloud migration** using **Terraform** and **AWS CloudFormation**, reducing environment setup time by up to **80%.**
- Built and maintained **CI/CD pipelines** with **Jenkins**, **GitHub Actions**, and **GitLab CI**, incorporating linting, testing, and rollback strategies to accelerate delivery and improve release reliability.
- Migrated legacy databases to **Amazon RDS PostgreSQL**, applying downtime orchestration, schema diff tools, and pg utilities to reduce data migration time by **60%.**
- Implemented observability solutions using **Prometheus**, **Grafana**, and **CloudWatch**, resulting in **35% faster** issue resolution and improved operational visibility.
- Experienced in **containerization** with **Docker** and **orchestration** with **Kubernetes**, enabling scalable and reproducible deployments.
- Hands-on expertise with **AWS** services (**EC2**, **S3**, **RDS**, **IAM**, **API Gateway**, **EventBridge**) and secure system design using **KMS**, **IAM** roles, and network isolation (**VPC**).
- Proficient in scripting and automation with **Python**, **Bash**, and tools like **Apache Airflow** and **MLflow** for pipeline orchestration and model lifecycle management.
- Strong collaborator in Agile teams, using **JIRA** for sprint planning and backlog tracking, and recognized for driving innovation with award-winning contributions.

## Professional Experience

**Machine learning Operations Intern,** *University of Houston Clear Lake.* **Jan 2025 – May 2025 | Houston, U.S.A**

- Implemented **MLOps** practices by designing automated data ingestion workflows from **MySQL** to **AWS S3** using **Apache Airflow**, establishing a foundation for **event-driven ML pipelines** and reducing manual data **preparation by 70%.**
- Architected end-to-end **ML pipeline** combining **AWS Glue** for data transformation with **scikit-learn** for predictive modeling, **achieving 87% accuracy** in library usage forecasting to optimize staff scheduling.
- Established **MLOps** best practices including model versioning with **MLflow**, containerized inference services via **Docker**, and **CloudWatch**-based drift detection for production ML systems.
- Collaborated cross-functionally with library staff to define feature requirements and validate model outputs, demonstrating ability to translate business needs into technical solutions.
- Maintained reproducibility and auditability using **Git** for version control and **pytest** for unit testing of pipeline logic.

**MLoPs Engineer,** *Bank of America (Infosys).* **Dec 2021 – Aug 2023 | Hyderabad, India**

- Transformed monolithic architecture by decomposing legacy fraud detection systems into microservices using **FastAPI** and **Node.js**, deployed as **AWS Lambda** functions with **API Gateway**, achieving **65% latency** reduction during peak trading volumes.
- Engineered real-time data processing infrastructure using **AWS Kinesis Data Streams** and **Apache Kafka** to handle high-frequency financial transactions with sub-second processing latency, supporting regulatory compliance requirements.
- Achieved mission-critical reliability by orchestrating **Kubernetes** deployments with **Horizontal Pod Autoscaler** for the Transaction Scoring Service, maintaining **99.9% uptime** and reducing fraud detection **delays by 40%** through proactive CloudWatch monitoring and SNS alerts.
- Designed enterprise-grade security frameworks implementing **IAM** role-based access control, **VPC** network isolation, and **KMS** encryption for sensitive financial data, ensuring **PCI-DSS** compliance while collaborating with security and platform teams.
- Streamlined deployment processes by building **CI/CD pipelines** with **GitHub Actions**, integrating **Maven** builds, security scanning, and automated rollbacks, reducing deployment **failures by 45%** and cutting release cycles from weeks to days.

**DevOps Engineer,** *Jeswin Technologies.* **May 2019 – Nov 2021 | Bengaluru, India**

- Spearheaded cloud adoption by migrating on-premises infrastructure to **AWS**, establishing foundational automation practices using **Terraform** and **CloudFormation** templates, creating standardized deployment patterns adopted across **5+ development** teams.
- Led database modernization efforts migrating legacy **SQL** systems to **Amazon RDS PostgreSQL** using **pg_dump** utilities and schema validation tools, implementing blue-green deployment strategies that reduced migration **downtime by 60%**.
- Established **DevOps** culture by introducing **CI/CD** practices with Jenkins and **GitLab CI**, incorporating static code analysis and automated testing, improving deployment confidence and reducing **manual intervention by 50%.**
- Built observability foundation implementing **Prometheus** and **Grafana** monitoring stack, creating custom dashboards for application performance tracking and reducing mean time to **resolution (MTTR) by 35%.**
- Enabled self-service deployments by documenting reusable **IaC** templates and mentoring **3+ development** teams to adopt standardized **CI/CD** pipelines, reducing support **requests by 30%.**

## Projects

**Job Tracker (Personal Project)** **June 2025 – Present**

- Developing responsive single-page application using **Vue.js/Nuxt**.js with **TypeScript** for job application management, featuring advanced filtering and analytics dashboard.
- Provisioning cost-effective infrastructure using **Terraform** with **AWS** Free Tier services (**S3** static hosting, CloudFront **CDN**, **API Gateway**) for scalable deployment.
- Implementing automated deployment pipeline with Jenkins and GitHub webhooks for continuous integration and testing

**Virtual Recreation Center Assistant** **Aug 2025 – Dec 2025**

- Built intelligent **NLP** chatbot using **Flask** and **spaCy**, processing natural language queries with 90%+ intent recognition accuracy for campus recreation services.
- Implemented model lifecycle management using **MLflow** for experiment tracking and Docker for consistent deployment across development environments.
- Orchestrated automated retraining workflows with **Apache Airflow**, improving model update **efficiency by 25%** and enabling seamless **A/B testing**

## Skills

**Infrastructure as Code:** Terraform, AWS CloudFormation
**Cloud Platforms:** AWS (EC2, RDS, S3, Lambda, EventBridge, IAM, VPC, KMS, CloudTrail)
**CI/CD Tools:** Jenkins, GitHub Actions, GitLab CI
**Monitoring & Logging:** Prometheus, Grafana, AWS CloudWatch, SNS
**Containerization:** Docker, Kubernetes
**Databases:** PostgreSQL, MySQL, Amazon RDS
**Scripting & Automation:** Python, Bash
**Workflow Orchestration:** Apache Airflow, MLflow
**Version Control & Collaboration:** Git, GitHub, Bitbucket, JIRA
**Security & Compliance:** IAM, KMS, AWS Config, PCI-DSS best practices

## Education

**University of Houston Clear Lake** **May 2025**

- Master of Science, Computer Software Engineering
- Courses: Design & Analysis Algorithms, Software Security, Natural Language Processing, Software testing, Machine Learning

## Awards & Recognitions

Honored with the **RiseQuarterly Award** for exceptional contributions to the team project at Bank of America

## Certifications

Machine Learning with Python **Analytics Labs – Bengaluru, India**