Sai Deepthi Jammula| Devops Engineer
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SUMMARY

Innovative DevOps Engineer with over 4 years of experience driving automation and infrastructure modernization for private capital financial services, retail, and higher education systems. Expertly designed and implemented secure GitLab CI/CD pipelines integrated with Kubernetes and Docker, cutting deployment times by 40% while maintaining strict compliance with financial data standards at MetLife. Proficient in automating cloud infrastructure lifecycle using Terraform and AWS CloudFormation to provision isolated environments that improved audit readiness and slashed setup times from days to minutes. Delivered event-driven Python automation with AWS Lambda for proactive anomaly detection, reducing service escalations by 95%. Advanced skills in ArgoCD and Helm for seamless blue/green and canary deployments that ensure zero downtime in mission-critical trade data platforms. Strong collaborator with cross-functional teams, deploying ML-driven risk models with Kubeflow to enhance portfolio accuracy and policy-as-code governance using OPA to achieve 100% compliance audit success. Adept at scripting Bash workflows that cut manual intervention by 75%, streamlining complex loan servicing data pipelines.

TECHNICAL SKILLS

Programming Languages:	Python, TypeScript, Bash/Shell Scripting, Groovy
DevOps & CI/CD:	GitLab CI, GitHub Actions, Jenkins, ArgoCD, Bazel, Nix
Databases:	MySQL, PostgreSQL, MongoDB
Cloud Platforms:	AWS (EC2, S3, RDS, Lambda, CloudFormation, CDK, Secrets Manager, Cost Explorer)
Infrastructure as Code:	Terraform, Helm, Nomad, Consul, Splunk, New Relic, Datadog
Containerization:	Docker, Kubernetes (EKS)
Monitoring & Logging:	Prometheus, Grafana, Loki, ELK Stack
Security & Compliance:	HashiCorp Vault, Open Policy Agent (OPA), Trivy, AWS IAM, Conftest
Testing & Automation:	JUnit, Selenium
Machine Learning & Data:	Kubeflow, MLflow, JupyterHub, MongoDB
Version Control:	Git, Bitbucket, GitFlow

EXPERIENCE

Metlife, IN   **Feb 2025 – Present**
Devops Engineer

- Architected secure CI/CD pipelines using GitLab CI, Docker, and Kubernetes to deploy private capital transaction services, reducing manual code handoffs and accelerating delivery cycles by 40%, while ensuring compliance with financial data handling standards.
- Automated infrastructure lifecycle using Terraform and AWS CloudFormation, provisioning isolated VPC environments for credit analytics systems, which improved audit readiness and reduced environment setup time from days to minutes.
- Developed event-driven monitoring solutions with Python, AWS Lambda, and CloudWatch Events to track anomalies in asset servicing APIs, enhancing operational visibility and proactively identifying 95% of service issues before user escalation.
- Refined deployment strategies using ArgoCD and Helm to support blue/green and canary deployments across investment risk modeling platforms, minimizing downtime and ensuring continuity for high-volume trade data ingestion.
- Orchestrated SRE-led postmortems leveraging ELK Stack and Prometheus to conduct root cause analysis on failed debt syndication processes, producing detailed retrospectives that reduced recurring incidents by 70%.
- Collaborated with financial analysts and risk teams to deploy ML-based forecasting models using Kubeflow and MLflow, supporting automated evaluation of borrower creditworthiness and improving portfolio risk scoring accuracy.
- Instituted policy-as-code governance using OPA (Open Policy Agent) and Conftest in the CI pipeline to enforce security and compliance rules on IaC definitions, leading to a 100% audit pass rate for quarterly compliance reviews.
- Scripted automation workflows using Bash and Shell to streamline data pipeline validation and nightly reconciliation tasks for private loan servicing systems, reducing manual intervention by 75% and ensuring consistent processing of high-volume capital transactions.

Purdue University Northwest, IN   **March 2023 – Dec 2024**
Devops Engineer / Lab Assistant

- Built containerized CI/CD pipelines with Docker, Kubernetes, and GitHub Actions to cut deploy time by 55% for student portal microservices, while reviewing 50+ Bitbucket pull requests per semester to uphold CI best practices and code quality.
- Designed and implemented observability frameworks using Grafana, Prometheus, and Loki to monitor campus-wide learning management systems, proactively identifying latency issues and improving uptime for over 15,000 active users.
- Automated infrastructure provisioning with Terraform and AWS CDK in TypeScript, enabling reproducible environments for research computing clusters and reducing manual setup errors by 80%.
- Evaluated and refactored legacy deployment scripts using Ansible and Bash, optimizing execution flow and integrating role-based access controls, which strengthened system security and aligned with FERPA compliance standards.
- Collaborated with Data Science teams to deploy JupyterHub on Kubernetes using Helm and ArgoCD, facilitating seamless multi-user notebook access for data-driven coursework and machine learning research initiatives.
- Created self-healing infrastructure patterns using Terraform, Consul, and Nomad, improving fault tolerance of backend APIs serving student enrollment systems and achieving a 99.98% SLA in peak registration periods.

TCS, India   **Jun 2021 – Dec 2022**
Devops Engineer

- Developed automation scripts in Python using libraries such as Boto3 and Paramiko to manage AWS resources and streamline SSH-based server maintenance tasks, reducing manual operational overhead and enabling scalable infrastructure automation across environments.
- Automated infrastructure provisioning by integrating Ansible with Jenkins CI/CD pipelines, ensuring consistent environment setups across development and staging, which improved deployment reliability and reduced configuration errors.
- Migrated over 10 microservices from manual scripts to Jenkins and Bash-driven automation, reducing human intervention by 60% and accelerating time-to-deployment for cross-functional teams.
- Revamped legacy CI/CD architecture by transitioning from Jenkins to GitHub Actions using YAML-based declarative workflows, cutting down release cycles by 40% and increasing deployment frequency.
- Provisioned AWS infrastructure using Terraform, including VPCs, EC2 instances, and security groups, to enable secure and scalable environments for containerized applications.
- Implemented Kubernetes resource management using Helm charts to orchestrate PostgreSQL and Redis clusters, achieving high availability and persistence across Cleanroom and Endurance environments with custom volume and init container configurations.
- Engineered secure PostgreSQL deployments on AWS RDS for microservices, applying fine-grained IAM roles, automated backups, and parameter tuning, resulting in enhanced resilience and regulatory compliance.
- Optimized Kubernetes master node performance by fine-tuning cluster settings, reducing compute costs by 25% while maintaining SLA-driven availability metrics.
- Led real-time incident collaboration with QA and SRE teams, resolving 30+ Sev-1/Sev-2 issues through root cause analysis using ELK Stack, Prometheus alerts, and Grafana dashboards, significantly lowering MTTR.
- Recovered critical services during a Sev-1 production outage, executing coordinated rollback and patch deployment within 2 hours, minimizing business impact and earning executive recognition.
- Diagnosed and resolved memory leaks in the ToscaO microservice using in-depth profiling and log analysis, leading to a 95% reduction in service restarts and receiving the "Star of the Month" award for impact.
- Enhanced code stability by developing and maintaining comprehensive JUnit test cases across microservices, ensuring regression prevention and improving deployment confidence.
- Developed modular Helm charts to manage Kubernetes deployments, enabling parameterized, repeatable configurations across dev and prod clusters, improving deployment consistency and reducing setup times by 50%.

Cybage Software, India   **Aug 2020 – April 2021**
Devops Engineer
- Architected and deployed CI/CD pipelines using GitHub Actions and Docker for retail microservices, ensuring faster release cycles and reducing deployment failures by 40%, to enable seamless omnichannel customer experience.
- Engineered infrastructure as code (IaC) using Terraform and AWS CloudFormation, automating environment provisioning across dev, QA, and production to support scalable e-commerce platforms with zero manual intervention.
- Implemented Kubernetes (EKS) with Helm for orchestrating containerized applications in a high-traffic retail environment, improving application availability and fault tolerance during peak sales campaigns like Black Friday.
- Developed Python-based automation scripts for system health checks, log aggregation, and auto-healing in distributed systems, enhancing operational efficiency and reducing incident resolution time by 60%.
- Evaluated and integrated Prometheus and Grafana to monitor application latency and infrastructure performance in real-time, enabling proactive scaling decisions and optimizing user checkout flow during flash sales.
- Customized Jenkins pipelines with Groovy DSL to handle multi-environment testing and deployment workflows, enhancing test coverage and ensuring bug-free rollouts of digital storefront features.
- Collaborated with cross-functional teams to containerize legacy retail applications using Docker and migrate them to cloud-native architectures, minimizing operational overhead and aligning with the client's digital transformation roadmap.
- Audited and enforced security best practices using tools like Trivy and AWS IAM policies, strengthening compliance posture and securing sensitive customer and payment data in accordance with PCI-DSS requirements.
- Analyzed infrastructure cost metrics using AWS Cost Explorer and automated shut-off for idle resources via Lambda and Boto3 scripts, cutting down monthly cloud spend by 25% without impacting system uptime.
- Streamlined version control and release management by standardizing Git branching strategies (GitFlow) across distributed teams, improving collaboration efficiency and reducing code merge conflicts by 70% during rapid feature rollouts for digital retail platforms.

PROJECTS

Product Aggregator Platform | Python, Selenium, MongoDB, Jenkins, Docker, AWS EC2   **Jan 2025**
- Developed a containerized scraping platform to collect price data from 50+ e-commerce sites, with daily ingestion of 1,000+ product listings.
- Deployed Docker containers on AWS EC2 with Nginx and cron jobs, achieving 99.9% uptime via automated Jenkins pipelines

EDUCATION

Master's in Computer science | Purdue University Northwest, IN   **Dec 2024**
Bachelors in Electronics and Communication Engineering | Malla Reddy College, India   **Jun 2021**

ACHIEVEMENTS & CERTIFICATIONS

Star of the Month, TCS – Resolved memory leak in critical service.   **Jun 2021**
On-the-Spot Award, TCS – For automation and performance tuning impact   **Mar 2021**