

Amit Kaushik

DevOps Engineer

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Profile

Results-driven and proactive DevOps Engineer with over 4 years of experience in automating infrastructure, managing CI/CD pipelines, and optimizing system performance across research (CSIR-NPL), global analytics (Kantar), and IT services (CMS). Skilled in leveraging modern DevOps tools like Docker, Kubernetes, Jenkins, Terraform, and AWS to streamline deployments, reduce downtime, and deliver scalable cloud and on-premise solutions. Strong background in Python, Bash, SQL, and infrastructure scripting (PowerShell), with proven success in database management, system monitoring, and high availability environments. Having experience collaborating with cross-functional teams to improve reliability and efficiency throughout the software delivery lifecycle. Currently seeking a challenging DevOps role to contribute to scalable, secure, and resilient infrastructure platforms.

Skills

- **DevOps Tools:** Jenkins, Git, Docker, Kubernetes, Ansible, Terraform
- **Programming & Scripting:** Python, SQL, PowerShell, Bash
- **Cloud Platforms:** AWS (EC2, S3, RDS, Lambda), Azure(Backup Solutions), GCP (Basic Exposure)
- **Infrastructure Automation:** Terraform, Ansible, Shell Scripting
- **Networking:** DNS, DHCP, Firewalls, Routers, Switches
- **Operating Systems:** Windows Server, Linux/Unix, macOS
- **CI/CD Pipelines:** GitHub Actions, Jenkins Pipelines, Automated Testing
- **Database:** SQL Server, MySQL, PostgreSQL, ETL Processes, Performance Tuning
- **Monitoring & Logging:** Prometheus, Grafana, ELK Stack, Resource Monitoring
- **Software:** Office 365 Admin, SOTI MobiControl, ServiceNow, JIRA

Professional Experience

Project Associate-II (DevOps Focus)

September 2024 – Present

CSIR-National Physical Laboratory (CSIR-NPL), Delhi

- Designed and implemented automated database backup and recovery pipelines using Docker and PostgreSQL, reducing manual intervention and ensuring data availability for research systems.
- Developed and maintained NTP server monitoring script (monitoring servers like samay1.nic.in, 157.20.66.8) with Python and Flask, integrating real-time Grafana dashboards for offset and delay visualization, improving system synchronization accuracy.
- Created a Flask-based alert system for email notifications with rate-limiting and SMTP integration, reducing alert noise and ensuring timely incident responses.
- Optimized database performance through indexing, query tuning, and resource allocation, enhancing system efficiency.
- Automated data processing workflows with Python scripts, cutting processing time and boosting accuracy.
- Supported infrastructure migrations to hybrid environments using Ansible and Terraform, ensuring zero downtime during transitions.

Executive, Database Management Support

March 2023 – August 2024

Kantar IMRB (Quess Corps Limited), Delhi

- Managed CI/CD pipelines using Jenkins for database updates and ETL processes, ensuring seamless data flow for global analytics projects.
- Automated database monitoring and patching with Bash and Python scripts, reducing manual effort by 60% and maintaining compliance with security standards.
- Resolved performance bottlenecks in large-scale MySQL databases through query optimization and indexing, improving report generation time by 25%.
- Facilitated cross-functional collaboration to migrate legacy systems to Azure-based platforms, minimizing service disruptions.
- Provided 24/7 support for mission-critical systems, achieving 99.9% uptime for global operations.

IT Support Engineer

May 2021 – February 2023

CMS IT Support, Delhi

- Automated database maintenance tasks using PowerShell and Bash, reducing operational overhead by 35%.

- Implemented a cloud-based backup solution on AWS S3, cutting data loss risk by 95%.
- Monitored and optimized SQL Server performance with Prometheus and Grafana, proactively resolving incidents and reducing downtime by 20%.
- Collaborated with developers to design scalable database architectures for new applications, ensuring robust deployment pipelines with Git and Jenkins.
- Improved first-call resolution rate by 20% through streamlined troubleshooting processes and documentation.

DevOps Projects

- **CI/CD Pipeline for Python Microservice (CSIR-NPL):** Built CI/CD pipeline using GitHub Actions, Docker, and Jenkins. Deployed microservice on AWS EC2 with automated testing and rollback.
- **Kubernetes Deployment with Monitoring (CSIR-NPL):** Created a multi-node K8s cluster using Minikube. Deployed a containerized app using Helm charts. Integrated Prometheus and Grafana for system monitoring.
- **Infrastructure as Code using Terraform:** Wrote Terraform scripts to provision AWS EC2, S3, and IAM roles. Automated networking and security group configuration.
- **DevOps Portfolio Website:** Created a professional portfolio (amitkcodes.github.io) using React and GitHub Pages, showcasing DevOps projects with CI/CD pipelines and Dockerized deployments.

Projects

- **NTP Server Monitoring System (CSIR-NPL):** Built a Python-based monitoring script for NTP servers (e.g., samay1.nic.in), integrated with PostgreSQL for data storage and Grafana for real-time visualization of offset and delay metrics. Automated data collection using Windows Task Scheduler, enhancing synchronization reliability.
- **Flask Alert System (CSIR-NPL):** Developed a Flask API for email alerts with rate-limiting and SMTP integration, reducing alert fatigue.
- **Efficient Waste Collection Application:** Designed a Python-based application for optimized waste collection routes, improving operational efficiency by 20%.
- **DevOps Portfolio Website:** Created a professional portfolio (amitkcodes.github.io) using React and GitHub Pages, showcasing DevOps projects with CI/CD pipelines and Dockerized deployments.

Education

Bachelor of Technology in Computer Science & Engineering
AKTU University, Mathura

2016 – 2020

Achievements

- Reduced mean time to resolve (MTTR) through efficient automation and escalation workflows at CSIR-NPL.
- Implemented a cloud-based backup solution at CMS, reducing data loss risk by 95%.
- Improved system reliability at CSIR-NPL by debugging and optimizing Python-based NTP monitoring systems.
- Achieved audit compliance by enhancing database security protocols at CSIR-NPL.

Certifications

- AWS Certified Solutions Architect – Associate (In Progress, expected 2025)
- ITIL Foundation – IT Service Management Best Practices
- Google IT support – Hardware, Software, and Troubleshooting
- ServiceNow – Project Management and Issue Tracking
- Course on Computer Concepts (CCC) – 2021
- Engineering Virtual Internship – 2020