

SHUBHAM TYAGI

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Pursuing a career as a DevOps Engineer focused on enhancing Automation, Cloud Technologies, and Continuous Integration and delivery methodologies within innovative technology firms.

## Profile Summary

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- Over 3.8 years of hands-on DevOps automation and CI/CD workflow management experience.
- DevOps Engineer at Cognizant, contributing to innovative solutions and operational efficiencies.
- Expertise in AWS infrastructure management using Terraform, Docker, and Kubernetes for deployments.
- Skilled in Jenkins, Git, GitLab, and Ansible for CI/CD pipeline optimization.
- Proven track record of automating deployment workflows, improving system reliability and performance.
- Experience with Prometheus and Grafana monitoring solutions for enhanced system visibility.
- Strong foundation in containerization, configuration management, and version control methodologies.
- Dedicated to high availability and operational excellence through automation strategies.

## Core Competencies

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- Cloud Infrastructure Management
- Configuration Management
- CI/CD Pipeline Automation
- Change Management
- Infrastructure as Code (IaC)
- Cloud Security & Compliance
- Containerization and Orchestration
- Risk Assessment
- ELK Stack: Implemented and maintained ELK stack for centralized logging and monitoring, enabling efficient debugging and performance analysis.
- Prometheus: Implemented and maintained Prometheus for application and infrastructure monitoring.
- Grafana: Implemented and maintained Grafana dashboards for visualizing metrics and logs.

## Technical Skills

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Cloud Computing: AWS (EC2, IAM, S3, RDS, ALB, NLB, Lambda, VPC, Route 53, Security Groups, CloudWatch, ECS)

Databases: MySQL

Containerization: Docker, Kubernetes

DevOps Tools: Jenkins, GitLab CI, Git, GitHub Actions, CI/CD

Infrastructure as Code: Terraform Configuration Management: Ansible

Programming Languages: Python, Bash Operating Systems: Windows, Linux/Ubuntu

## Work Experience

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Since Dec'24 with Cognizant, Noida

Role as Senior Infra Developer:

- Project Involvement – Multi-Region Migration & DevOps Enablement
- Migration & Regional Expansion: Contributed to the migration and infrastructure expansion across multiple AWS regions. Actively involved in provisioning new environments to support regional deployments.
- Helm Upgrade & Management: Upgraded Helm versions for new regions, ensuring compatibility with application deployment pipelines and cluster configurations.
- CI/CD Enhancements: Updated Jenkinsfiles to support multi-region and multi-environment builds using dynamic parameters and variables, streamlining deployment processes.
- Secret Management: Managed and updated secrets for newly added regions to maintain secure access and compliance.
- Infrastructure Provisioning with Terraform: Created and managed Kubernetes clusters in new regions using Terraform, ensuring consistency and scalability through reusable modules.
- Monitoring & Observability: Implemented and maintained monitoring solutions using AWS CloudWatch and Datadog to ensure real-time visibility into infrastructure and application performance.
- Version Control & Collaboration: Created feature branches in GitHub as per project requirements and collaborated with team members to review and merge changes into the main branch following standard Git practices.
- Terraform Code Enhancements: Refactored Terraform configurations to support multi-region deployments and automate provisioning across environments.

Nov 2021 to Nov 2024 with Motherson Technology Services Ltd., Noida

Growth Path:

Cloud Engineer (Nov'2021 to Nov'2023)

DevOps Engineer (Nov'2023 to Present)

Role as Cloud Engineer:

- AWS Infrastructure Management: Provisioned and managed a comprehensive suite of AWS services (EC2, IAM, S3, RDS, Lambda, VPC, Route 53, EKS) to support scalable application deployment. Optimized storage solutions by configuring EBS volumes and utilizing AWS LVM for efficient volume management.
- Containerization and Orchestration: Spearheaded containerization using Docker and orchestrated microservices with Kubernetes, ensuring high availability and operational efficiency. Developed and maintained Docker images and containers for consistent deployment practices.
- CI/CD Pipeline Design: Designed and maintained CI/CD pipelines with Jenkins, enhancing software delivery lifecycle efficiency. Collaborated with development teams to establish Jenkins pipelines, achieving faster release cycles.
- Security and VPN Configuration: Set up secure communication channels through Site-to-Site and Point-to-Site VPN connections. Collaborated with security teams to implement IAM roles and policies, enhancing data protection and compliance.
- Infrastructure as Code (IaC): Developed AWS infrastructure using Terraform, streamlining deployment and enhancing scalability through reusable modules.
- Version Control and Collaboration: Utilized Git, GitLab, and GitHub for continuous development workflow. Managed branches for Docker files, Ansible playbooks, and Kubernetes manifests based on project requirements.
- Linux File System Management: Created file systems with LVM, developing physical volumes (PVs) and volume groups (VGs) tailored to project specifications.
- System Monitoring and Maintenance: Implemented AWS Systems Manager for automated patch management and used AWS CloudWatch to monitor resources, proactively addressing performance issues.
- Backup and Recovery: Established and managed backup protocols using AWS Backup and snapshots, ensuring data integrity and availability.
- Cost Optimization and Resource Utilization: Analyzed AWS resource usage, leading cost-reduction efforts through automation and best practices for resource tagging and rightsizing.
- Cross-functional Collaboration: Engaged actively with development and operations teams to align on project objectives and delivery timelines, driving continuous improvement initiatives.

#### Role as DevOps Engineer:

- **AWS Infrastructure Development:** Built robust AWS infrastructure from scratch using Terraform, improving deployment efficiency and scalability. Automated provisioning of VPC, EC2, ALB, EBS, NLB, IAM, and S3 resources.
- **Microservices Containerization:** Implemented Docker-based containerization and orchestrated services with Kubernetes, ensuring high availability. Created and managed Docker images and containers for consistent deployment.
- **Configuration Management:** Utilized Ansible for consistent setup across environments. Developed and maintained Docker files, aiding in creating base images for QA and Performance teams.
- **Monitoring and Observability:** Set up monitoring with Prometheus and Grafana, enhancing visibility into system health. Created scripts for proactive issue resolution across build machines, CI/CD applications, and Kubernetes clusters.
- **CI/CD Automation:** Prepared end-to-end pipelines with Jenkins, automating software releases and minimizing downtime. Managed Jenkins pipelines for integration, nightly, and release builds, reducing manual effort.
- **Version Control Management:** Managed GitLab repositories, managed merge requests, and created branches according to project requirements. Utilized GitHub for collaboration and version control.
- **Security and Code Quality:** Integrated SonarQube for code analysis, ensuring code quality and security. Conducted Trivy scans for Docker images to identify vulnerabilities early in the development lifecycle.
- **Kubernetes Expertise:** Worked with Kubernetes resources including deployments, namespaces, persistent volumes, services, and configmaps. Developed YAML configurations for infrastructure as code management.

Oct 2019 to Nov 2020 with Progressive Info Vision Pvt Ltd. (Desktop Support Engineer)

#### Achievements

- Ensured data integrity and availability through comprehensive backup and recovery processes.
- Optimized AWS resources, resulting in substantial cost savings.
- Enhanced operational efficiency through automated patching and updates.
- Streamlined CI/CD pipelines, reducing deployment time.
- Implemented cost optimization strategies, resulting in a reduction in operational costs.

## Education

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2019: B.Tech. in Mechanical Engineering from Dr. A.P.J. Abdul Kalam Technical University, Lucknow  
Certification

AWS Certified Solutions Architect from AWS

#### Personal Details

Date of Birth: 26th Jan 1998

Languages Known: English & Hindi