

# Madhuran K

Cloud & DevOps Engineer

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## Career Objective

Cloud & DevOps trainee skilled in AWS, Azure, Linux, Docker, Jenkins, Kubernetes, and automation. Seeking an entry-level Cloud/DevOps role to support deployments and improve infrastructure reliability.

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## Technical Skills

**Cloud:** AWS (EC2, S3, IAM, VPC, ELB/ALB, EKS, Route53, Auto Scaling CloudWatch), Azure VMs, VNets, NSG, Azure Monitor

**DevOps:** Git, GitHub, Jenkins(CI/CD), Docker, Kubernetes (Basics), Terraform, CloudFormation

**Linux:** User management, permissions, Apache, SSH, networking, shell scripting

**Networking (CCNA):** OSI & TCP/IP models, subnetting, VLSM, ACL, NAT, STP

**Python:** boto3 automation, file handling, monitoring scripts

**Tools:** Git, Jenkins, Docker, Ansible, Terraform, Linux, AWS CLI, AWS, Azure, Tomcat

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## Projects

### 1.DevOps Automated Cloud-Native CI/CD Pipeline for Scalable Web Applications

Automated Cloud-Native CI/CD Pipeline for Scalable Web Applications

- Implemented event-driven CI/CD using GitHub Webhooks to automatically trigger Jenkins pipelines on every code commit
- Developed Jenkins Pipeline as Code (Jenkinsfile) to automate build, test, and deployment workflows
- Built Docker images directly from Dockerfile stored in the source repository and pushed versioned images to Docker Hub
- Deployed containerized applications on Kubernetes with rolling updates and self-healing capabilities
- Provisioned and configured AWS infrastructure including EC2, IAM, VPC, and Security Groups for a production-like environment
- Integrated Prometheus and Grafana for real-time metrics collection, dashboards

### 2. Scalable Web App Deployment on AWS using Terraform, Jenkins & Ansible (CI/CD + IaC)

- Used GitHub for source control and triggered Jenkins on EC2-Server-1 to pull application code and build a WAR artifact.

- Executed Terraform from EC2-Server-1 to provision AWS infrastructure — VPC, subnets, EC2 instances, Load Balancer, and Security Groups.
- Configured EC2-Server-2 as an Ansible control node and transferred the WAR output from Jenkins.
- Ran Ansible playbooks from EC2-Server-2 to configure provisioned EC2 instances and deploy the application automatically.
- Delivered a complete CI/CD pipeline achieving automated build, infra provisioning, configuration, and deployment with minimal manual intervention.

### 3. AWS 3-Tier Web Application Architecture

Designed a scalable and secure 3-tier architecture on AWS.

- Web, App, and DB tier segmentation using VPC subnets.
- Auto Scaling Groups + ALB for high availability.
- Bastion Host & NAT Gateway for secure access.
- RDS multi-AZ for database replication.

### 4. AWS Automation Using Python (Boto3)

Automated cloud tasks using Python.

- Developed AWS automation scripts using **Python (Boto3)** to manage cloud resources efficiently
- Configured and used a dedicated **IAM user with programmatic access** for secure automation
- Set up **AWS CLI on the local command prompt** and authenticated using IAM access keys
- Automated **Amazon S3 bucket creation, object uploads, and logging operations** through Python scripts

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## Education

**B.Sc. Computer Science** — Manonmaniam Sundaranar University (2022–2025) | 80%

**Diploma in Mechanical Engineering** — Chandy Polytechnic College (2018–2020) | 76%

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## Certifications

- **Besant Technologies:** AWS-Azure Cloud, Linux Administration, CCNA Networking, DevOps, Python
  - **Unxt Udhogam:** Soft Skills & Communication Training
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