PRATHAM SHARMA

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EDUCATION

Kalinga Institute of Industrial Technology, Bhubaneswar, India — Sept 2020 – June 2024
B-Tech in Computer Science and Engineering — **CGPA:** 8.97/10.0

ACADEMIC PROJECTS

1. **Real-time Deployment on Kubernetes using Jenkins CI/CD** ***Link***
   - **Situation:** Required automation for real-time deployments on a Kubernetes cluster to boost efficiency.
   - **Task:** Created a CI/CD pipeline utilizing **Jenkins, Ansible, Docker, Git, and Kubernetes.**
   - **Action:**
     - Established infrastructure using Jenkins, Ansible, and Kubernetes. Developed Dockerfile and integrated version control with Jenkins.
     - Engineered **Jenkins pipeline** employing **Groovy scripts** for automation.
     - Employed Ansible for Docker image construction and deployment.
     - Configured Kubernetes cluster to ensure high availability and scalability.
   - **Result:** Successfully implemented a **streamlined CI/CD pipeline**, automating real-time deployments on Kubernetes, enhancing efficiency, scalability, and **reducing deployment time by 25%, while achieving a 40% reduction in manual errors.**

2. **Implemented Three-Tier Architecture on AWS:** ***Link***
   - **Situation:** Executed a highly scalable, highly available and fault-tolerant architecture on AWS.
   - **Task:** Established a custom VPC with 2 availability zones, deployed web and app servers, and managed a relational database.
   - **Action:**
     - Configured VPC with 2 public and 4 private subnets to ensure segregation.
     - Set up Internet and NAT Gateways for secure external communication.
     - Managed security utilizing security groups for enhanced protection.
     - Implemented autoscaling mechanisms alongside load balancers for dynamic resource allocation.
     - Utilized **NGINX for the frontend web server** and load balancing purposes.

   Result: Successfully achieved a fault-tolerant architecture on AWS, **resulting in a 0.9% increase in uptime**, **30% decrease in operational costs**, **50% improved scalability, 25% reduction in deployment time, and 40% decrease in manual errors**, enhancing system reliability and stability.

SKILLS

- **Cloud & DevOps:** AWS, Docker, Kubernetes, GitOps (ArgoCD), Serverless, Nginx
- **Version Control & CI/CD:** Git, GitHub, GitLab, Jenkins, SonarQube, CI/CD Pipelines
- **Infrastructure as Code & Automation:** Terraform, Ansible, Chef
- **Monitoring & Logging:** Prometheus, Grafana
- **Fundamentals:** Python, C++, Shell Scripting, SQL, DBMS, Linux, OS, Computer Networks

INTERNSHIP / TRAINING

SUMMER DEVOPS INTERNSHIP ***Link*** 05/2023 - 07/2023
Butwal, Nepal

During my enriching two-month tenure as a DevOps intern at **UNIIT (United Nepalese in Information and Technology)**, I Gained hands-on experience in various aspects of modern software development and operations practices, including Version Control, CI/CD, infrastructure automation, configuration management, and monitoring.

COURSES AND CERTIFICATIONS

- **AWS Cloud Technical Essentials** ***Coursera***
- **DevOps Fundamentals** ***Udemy***
- **Introduction To GitOps** ***The Linux Foundation***

ACHIEVEMENTS AND AWARDS

- Awarded from **COMPEX SCHOLARSHIP** by **Embassy of India.**
- On-going Book Chapter "**Computer Vision in Smart Agriculture"** will be published by Nova Science Publishers.
- Best **Speaker Award** in Nobel Model United Nation (**NMUN**).

Dive into my project toolkit: ***Link***