JANAK KUMAR SHRESTHA

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SUMMARY

Aspiring DevOps Engineer with hands-on expertise in architecting and automating scalable cloud infrastructure and CI/CD pipelines. Hands-on experience in containerization (Docker, Kubernetes), infrastructure as code (Terraform, Ansible), and cloud-native deployment on AWS. Holds the AWS Solutions Architect – Associate certification and possesses deep, practical experience across AWS services including EC2, S3, VPC, IAM, RDS, and CloudWatch. Passionate about implementing resilient, secure, and automated systems that enhance operational efficiency and accelerate software delivery.

EXPERIENCE --

Adex International Pvt. Ltd.   *Lalitpur, Nepal • Nov 2025 — Dec 2025*

AWS Solutions Architect Associate – Apprenticeship

- Completed comprehensive AWS Academy Cloud Architecting program covering 16 modules including compute, storage, databases, networking, security, and serverless architectures aligned with the AWS Well-Architected Framework.
- Designed and implemented scalable, highly available solutions through hands-on labs involving Amazon EC2, S3, RDS, VPC, Lambda, and CloudFormation, demonstrating proficiency in building production-grade AWS architectures.
- Automated infrastructure deployment using AWS CloudFormation and built decoupled serverless applications with Lambda, API Gateway, and SQS, reducing manual provisioning efforts and improving system resilience.
- Successfully completed capstone project and course assessment, applying disaster recovery patterns, cost optimization strategies, and security best practices including IAM policies, encryption, and VPC security configurations.

Datahub Nepal Pvt. Ltd.   *Lalitpur, Nepal • May 2025 — Jul 2025*

System Administrator - Intern

- Monitored datacenter infrastructure using Zabbix monitoring system, tracking server health, resource utilization, and system performance metrics to ensure optimal uptime and proactive issue detection.
- Managed cloud resources including virtual machines and VPC configurations across multiple cloud platforms, provisioning and maintaining client environments in accordance with service level agreements.

- Performed compute resource upgrades on client VMs, scaling CPU, memory, and disk resources based on performance requirements, and configured NFS and LVM storage solutions for enhanced data management.
- Worked with enterprise datacenter infrastructure including Pure Storage flash arrays, VMware ESXi hypervisors, Fortigate firewalls, and host units, gaining hands-on experience with the underlying components powering cloud services.
- Provided customer support and system troubleshooting as a system administrator, resolving technical issues, responding to service requests, and maintaining system stability in a datacenter environment.

Broadway Infosis Pvt. Ltd. *Kathmandu, Nepal • May 2025 — Jul 2025*

DevOps Training

- Covering Linux fundamentals, networking, cryptography, source control management (Git), RDBMS, establishing a strong foundation in DevOps prerequisites and best practices.
- Hands-on experience with containerization and orchestration technologies including Docker and Kubernetes, building multi-container applications with Docker Compose, managing pods and deployments, and implementing CI/CD pipelines with Jenkins for automated application delivery.
- Automated infrastructure provisioning using Ansible playbooks and Infrastructure as Code (IaC) with Terraform, reducing manual configuration efforts and ensuring consistent environments.
- Gained hands-on experience with AWS cloud services including EC2, VPC, S3, Load Balancers, and IAM policies and deploying scalable applications.

PROJECTS   --

Quickmail - MERN Stack Email Service *Project Link*

- A quickmail service built by learning gmail smtp with Mern Stack, containerized via Docker multi-stage builds. It offers flexible persistence with support for both MongoDB Atlas and local MongoDB.
- Security is paramount with enterprise-grade protection (helmet, rate-limiting) and deep email validation. Uniquely, "Ghost Mode" enables zero-trace client-side messaging for maximum privacy.

Enterprise Linux Storage Management with LVM *Project Link*

- Implemented Logical Volume Management (LVM) to dynamically manage server storage, creating scalable volume groups and logical volumes for flexible resource allocation.
- Executed critical system maintenance by migrating system directories like `/var/log` to dedicated logical volumes, preventing root partition saturation and ensuring server stability.

Multi-Protocol Remote Access with Cloudflare Tunnel *Project Link*

- Implemented Cloudflare Tunnel to securely expose local Linux services (SSH, RDP, Node.js) to the internet without opening inbound ports, ensuring zero-trust network security.

- Configured persistent systemd services and secure ssh and rdp connections to ensure high-availability connections for SSH and Remote Desktop (RDP) workflows.

Self-Hosted Nextcloud AIO *Project Link*

- Deployed a secure, self-hosted Nextcloud All-in-One (AIO) instance using Docker on Ubuntu, ensuring complete data sovereignty and compliance as a private cloud alternative.
- Configured optimized Docker containers for Nextcloud Office and Talk, enabling real-time document collaboration and secure video conferencing behind an automated reverse proxy.

Centralized Network Storage with NFS *Project Link*

- Deployed Network File System (NFS) infrastructure to centralize storage across multiple Linux servers, enabling seamless file sharing and collaborative access.
- Configured secure NFS exports with granular access controls and firewall rules, implementing network segmentation to restrict client access to trusted subnets.

Multi-Master Database Clustering MariaDB Galera *Project Link*

- Architected a multi-master MariaDB Galera Cluster with synchronous replication across three nodes, achieving zero-lag active-active database operations for mission-critical applications.
- Configured cluster-wide wsrep parameters and firewall rules to ensure fault tolerance, automatic node recovery, and seamless data consistency across distributed database infrastructure.

Production WordPress Deployment with Docker & SSL *Project Link*

- Deployed production-ready WordPress with Docker Compose, orchestrating multi-container architecture with MariaDB backend and persistent volume management for data integrity.
- Configured Apache reverse proxy with Let's Encrypt SSL automation, implementing HTTPS encryption and certificate auto-renewal for secure web hosting.

Traditional LAMP Stack with WordPress & phpMyAdmin *Project Link*

- Deployed full-stack LAMP environment (Linux, Apache, MariaDB, PHP) on Debian, configuring Apache virtual hosts and phpMyAdmin for database administration.
- Installed and configured WordPress CMS with database integration, implementing proper file permissions and directory structure for secure web hosting.

Containerized Django Application Deployment on AWS EC2 *Project Link*

- Deployed production Django application on AWS EC2 using Python virtual environments and Docker containerization, configuring security groups and network access controls.
- Implemented multi-stage deployment strategy with Docker image builds, container orchestration, and background process management using nohup for continuous service availability.

HA Load Balancing with AWS ALB & ACM *Project Link*

- Architected highly available infrastructure using AWS Application Load Balancer across multiple availability zones, implementing target groups and health checks for fault-tolerant traffic distribution.

- Configured end-to-end SSL/TLS encryption with AWS Certificate Manager (ACM) and Cloudflare DNS validation, ensuring secure HTTPS communication and automated certificate renewal.

Full-Stack PHP App Deployment with Docker & Nginx *Project Link*

- Deployed containerized PHP/MySQL application on AWS EC2 using Docker Compose, implementing reverse proxy architecture with Nginx for production-grade web hosting.
- Configured automated SSL/TLS certificates with Let's Encrypt (Certbot), establishing secure HTTPS connections with custom domain integration and certificate auto-renewal.

Architecting a Secure Virtual Private Cloud (VPC) *Project Link*

- Engineered a custom Amazon VPC architecture with segmented public and private subnets to enforce granular network security boundaries.
- Configured Internet Gateways and Route Tables to establish secure connectivity for public-facing application servers while isolating private resources.

Architecting Scalable & HA Web Infrastructure *Project Link*

- Designed a fault-tolerant Multi-AZ architecture using Auto Scaling Groups and Application Load Balancers to ensure high availability for mission-critical web applications.
- Configured dynamic scaling policies driven by CloudWatch CPU utilization metrics to automatically adjust compute capacity, optimizing performance and cost-efficiency under fluctuating traffic.

EDUCATION --

JMC College affiliated with TU *Kathmandu, Nepal • 2020 — 2025*

Bachelor in Computer Applications

- Completed 3 major projects: Dictionary application, Pong 2D Android game, and HAMRO BANK: a signature forgery detection system using machine learning for banking security.

Pentagon International College *Kathmandu, Nepal • 2018 — 2019*

Higher Secondary Education

- Studied in Science (Physical Group) with a focus on Physics and Mathematics.

CERTIFICATIONS & BADGES ----------------------------------

- AWS Certified Solutions Architect - Associate (SAA-C03)
- LFS167: Introduction to Jenkins - *The Linux Foundation*
- LFS101: Introduction to Linux - *The Linux Foundation*
- Networking Basics - *Cisco*
- DevOps Engineer - *Broadway Infosys*
- Full Stack Development - *Mimo*

- AWS Academy Graduate - Cloud Security Foundations – Training Badge

PROFILES

LinkedIn	GitHub	Credly	Blog	Portfolio	Online Resume

AWARDS

- MSS Science Exhibution 2074
- **2nd** place in quiz competition - AWS Secure the Cloud Event 2025

SKILLS & TECHNOLOGIES

- OS & Networking: Linux (Ubuntu, Alma, Rockey), Subnetting, NAT, VPC
- Web & Hosting: Nginx, Let's Encrypt, Reverse Proxy, Load Balancer
- Security: SSL/TLS: Basic Cryptography
- Containers: Docker, Docker Compose, Volumes, Networking
- CI/CD: Jenkins (Self-hosted, GitLab Integration), Git, Webhooks
- IaC & Automation: Terraform (Basics), Ansible (Playbooks, Server Groups)
- Orchestration: Kubernetes (Basics)
- Cloud: Microsoft Azure & AWS (VMs, Storage, Networking, Security)
- DNS/Domain: Cloudflare, .np Domains, sub domains