# Yash Gupta

DevOps & Cloud Developer

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GitHub - Yash-xoxo | Linkedin - Yash Gupta | Link To My Portfolio

## ABOUT ME

Passionate and dedicated **DevOps Engineer** with a strong drive to excel in fast-paced and challenging environments. Known for a hunger to continuously learn and adapt to emerging technologies, I thrive on solving complex problems and implementing efficient solutions. With a focus on innovation and productivity, I aim to leverage my skills to streamline processes, enhance system reliability, and contribute to the overall profitability and growth of the organization.

## WORK EXPERIENCE

June 2025 - August 2025
Jaipur, Rajasthan

**DevOps Engineer**

**LinuxWorld Informatics Pvt Ltd**

- Gained hands-on experience working on multiple Linux distributions to simulate real industrial environments and professional workflows.
- Towards the end of my training, I developed my own startup (Travozom).
- Worked extensively on multiple Linux distributions to simulate real industrial environments and understand professional workflows.
- Maintained production-like servers, deployed applications, and resolved issues under real-time traffic conditions, improving system uptime and reliability.
- Automation Project—Docker, Kubernetes, AWS, Terraform, Ansible, Jenkins & messaging Project on Streamlit: this integrates all tasks on one web page to operate easily.

## CERTIFICATES

★ **AWS Cloud Quest: Generative AI Practitioner - Training Badge**
★ **AWS Cloud Quest: Cloud Practitioner - Training Badge**
] Issued by Amazon Web Services Training and Certification - Oct 2025

★ **Blockchain: Understanding Its Uses and Implications (LFS170)**
★ **Kubernetes:入門 LFS158JP**
] Issued by Linux Foundation Training - Nov 2025 & May 2025

★ **JASBAA 4.0 - Startup Show Casting (TRAVOZOM)**
★ **AWS Cloud With Artificial Intelligence Workshop**
] Issued by LinuxWorld Informatics Pvt Ltd - Aug 2025 & July 2025

★ **Linux Redhat Certified System Administrator (RHCSA - EX200)**
★ **Fedora From Scratch**
] Issued by Udemy - Nov 2024 & June 2025

## EDUCATION

**B.Tech in Computer Science** — **August 2022 – July 2026 | Bareilly**

Dr. A.P.J. Abdul Kalam Technical University

Specialized in software engineering and database management

Learned about the Operating System behavior and Algorithms with Mathematics

## SKILLS & TOOLS

**Programming Languages:** JavaScript, Python, Bash
**Databases:** MySQL, MongoDB
**Frameworks & Libraries:** Flask, AI Agents, Numpy, Boto3
**Cloud Platforms:** AWS, Google Cloud
**Operating System:** Fedora, Arch, Red Hat Enterprise Linux, Ubuntu
**CI/CD & Infrastructure:** Git, GitHub Actions, Release Management, Monitoring & Logging
**DevOps & Automation Tools:** Docker, Kubernetes, Jenkins, Ansible, Terraform, Prometheus, Grafana, N8N, Make

# PROJECTS

## 1. Proxmox Virtualization Infrastructure (Type-1 Hypervisor Deployment)

**Concept:**
Enterprise-grade virtualization stack enabling isolated compute environments for development, testing, and automation workloads.

**Tech Stack:**
Proxmox VE, KVM/QEMU, LXC, Debian, ZFS

**Highlights:**

- Provisioned multi-VM cluster with high-efficiency virtualization
- Configured virtual networking, storage pools, ISO provisioning, and containerized workloads
- Enabled a full on-prem hypervisor capability for scalable DevOps experiments

## 2. Bitcoin Lottery Mining & Blockchain Compute Dashboard

**Concept:**
Distributed compute simulation for "lottery-odds" Bitcoin mining using containerized workloads and real-time analytics.

**Tech Stack:**
Docker, Node.js, Express, React, Socket.IO, cpuminer-opt

**Highlights:**

- Real-time visualization of hashrates, worker performance, and mining statistics
- Multi-node orchestration via Docker for parallel compute testing
- Built a full GPU/CPU analytics dashboard with reactive UI

## 3. RandomX & Crypto Mining Research Suite (Monero, Zephyr, VerusCoin)

**Concept:**
Hands-on evaluation of RandomX PoW algorithm and feasibility testing of solo mining on consumer hardware.

**Tech Stack:**
RandomX, XMRig, VerusMiner, Zephyr Miner, Linux

**Highlights:**

- Benchmarked CPU mining performance, block probability, and algorithmic efficiency
  Solo-mined VRSC/ZEPH for probability modeling and network-difficulty analysis
- Successfully mined Monero in a pool, validating end-to-end mining lifecycle

## 4. Distributed Computing for Science: BOINC + Folding@Home Contributions

**Concept:**
Donated compute cycles for global research platforms supporting astrophysics, climate science, protein folding, and disease modeling.

**Tech Stack:**
BOINC, Folding@Home, Linux, Systemd Automation

**Highlights:**

- Configured workloads across multi-core environments for optimized throughput
- Supported scientific research in COVID, cancer, and Alzheimer's protein analysis
- Automated project prioritization and system resource budgets

## 5. DevOps & AI Automation Control Center

**Concept:**
Unified operations console integrating cloud workflows, AI agents, and automation pipelines.

**Tech Stack:**
Python, Node.js, Docker, Kubernetes, Jenkins, Terraform, Ansible, MongoDB, GenAI APIs

**Highlights:**

- Multi-domain automation: cloud provisioning, messaging bots, and CI/CD triggers
- Integrated AI assistants for task execution and workflow orchestration
- Real-time interactive terminal inside the dashboard

## 6. n8n-Driven AI Workflow Engine

**Concept:**
Autonomous news, DevOps insights, and LLM-enhanced data pipelines.

**Tech Stack:**
n8n, Gemini API, Telegram/Discord Bots, Docker, RSS Frameworks

**Highlights:**

- Automated scheduling engine (45-minute continuous aggregation cycle)
- LLM-powered summarization for Kubernetes/Cloud/DevOps feeds
- Multi-platform publishing via chatbots

## 7. Containerized Full-Stack Travel Platform

**Concept:**
End-to-end travel booking ecosystem built on a containerized microservice architecture.

**Tech Stack:**
React, Node.js, Express, MongoDB, Docker Compose

**Highlights:**

- Secure auth workflows, booking CRUD flows, and service isolation
- Modern glass-morphism UI across devices
- Full containerization for seamless deployment

## 8. Kubernetes Auto-Scaling Web Cluster

**Concept:**
Self-healing, load-adaptive web infrastructure modeling production cloud behavior.

**Tech Stack:**
Kubernetes (HPA), Minikube, Docker, Apache HTTPD

**Highlights:**

- CPU-driven horizontal autoscaling (HPA)
  Simulated real-world load with 10+ replica pods
- Highly resilient NodePort exposure with live traffic testing

## 9. CI/CD Pipeline for Python Microservices

**Concept:**
Automated integration and deployment lifecycle for Python workloads.

**Tech Stack:**
Jenkins, GitHub, Docker, Pytest

**Highlights:**

- Commit-triggered Jenkins pipeline with automated tests
- Docker image build-push-deploy flow
- Production-grade CI/CD simulation for microservices

## 10. Offline AI Model Ecosystem

**Concept:**
Local compute environment for running LLMs and vision models without internet connectivity.

**Tech Stack:**
Ollama, Hugging Face, Open WebUI, DeepSeek, LLaMA 3.1, Gemma

**Highlights:**

- Multi-model management with hardware-accelerated inference
- Fully air-gapped AI development platform
- Integrated text and vision generation workflows

## 11. CNC Machine Writer (Hackathon Project)

**Concept:**
Automated CNC-based pen plotter converting G-code into physical drawings.

**Tech Stack:**
ESP32, CNC Shield, GRBL Firmware, G-code Parser

**Highlights:**

- Three-axis control for pen plotting
- G-code interpretation and rendering precision
- Offline execution with on-device logic