Priyanshu Kumar

B.Tech CSE — Cloud Computing — DevOps — Machine Learning Engineer
Bhopal, India
p9958536954@gmail.com — +91 9958536954
LinkedIn — GitHub

TECHNICAL SKILLS

Languages: Python, Java, C++, SQL, JavaScript, HTML/CSS
Cloud Platforms: **AWS** (EC2, S3, RDS, IAM, Lambda), **Azure** (Cosmos DB, Data Lake, Functions)
DevOps & MLOps: **Docker**, **Kubernetes**, **Terraform**, CI/CD Pipelines, Git, Linux, Prometheus, Grafana
Frameworks & Libraries: Flask, Streamlit, React, Node.js, Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, OpenCV
Databases: MySQL, PostgreSQL, MongoDB, Azure Cosmos DB, Data Warehousing, ETL Pipelines
Concepts: Microservices Architecture, RESTful APIs, Model Deployment, Agile/Scrum, MLOps, Distributed Systems, Network Security

EDUCATION

Vellore Institute of Technology (VIT), Bhopal **Aug 2023 – May 2027**
B.Tech, Computer Science & Engineering — Specialization: **Cloud Computing** & Automation — CGPA: 8.24/10
Relevant Coursework: Cloud Architecture, Distributed Systems, Machine Learning, Data Engineering, Network Security
Key Projects: Developed production-grade **cloud-native applications** using **AWS** and **Docker**; Researched QoS routing protocols and GHG emissions modeling using ML.

Kendriya Vidyalaya Janakpuri, Delhi **Apr 2023**
Class XII (CBSE) — 82%

International Indian Public School (IIPS), Riyadh **Mar 2021**
Class X (CBSE) — 84.6%

CERTIFICATIONS

AWS Certified Cloud Practitioner *Issued: Jun 2025 — Score: 780/1000*
Architected secure, scalable cloud environments using **AWS EC2, S3, RDS, IAM**; applied Well-Architected Framework principles to optimize cost, performance, and reliability in academic deployments.
Verify Credential

Microsoft Certified: Azure Data Fundamentals (DP-900) *Issued: Jun 2025 — Score: 750/1000*
Designed data ingestion pipelines using **Azure SQL, Cosmos DB, Data Lake**; implemented ETL workflows to structure raw datasets for ML training — improved processing efficiency by 35% in simulation.
Verify Credential

PROFESSIONAL EXPERIENCE

Research Intern — GHG Emissions Monitoring Project (Remote, UAE) **May 2025 – Aug 2025**
• Led 4-member Agile team using Scrum methodology; delivered 3 cloud analytics milestones 2 weeks ahead of schedule.
• Engineered real-time ML forecasting models (Python, Scikit-Learn) processing IoT sensor streams to predict CO/CH emissions with 91% precision.
• Automated carbon credit reporting dashboard using Flask and Plotly, reducing manual effort by 40% and accelerating compliance cycles.
• Authored system documentation and presented technical insights to cross-functional teams across UAE and India.

RESEARCH PROJECTS

AI-Based QoS Routing in Fog Networks **Jan 2025 – Present**
Designed novel AI-driven routing protocol using Reinforcement Learning and blockchain for fog computing environments
• Reduced end-to-end latency by 35% (75.2ms vs. 120.3ms) in 50-node NS-3 simulations by dynamically avoiding congested paths.
• Improved Packet Delivery Ratio (PDR) by 15% (92.1% vs. 82.5%) through real-time congestion-aware routing

decisions.
• Increased network throughput by 35% (19.7 Mbps vs. 12.3 Mbps) via multi-objective optimization of latency, load, and energy.
• Lowered energy consumption by 30% (1.65J vs. 2.45J per packet) using RL-based power-aware path selection.
• Integrated blockchain layer achieving 96.7% attack detection accuracy for tamper-proof route validation in adversarial networks.
• Outperformed Energy-Aware and Load-Balanced Routing baselines across all QoS metrics in 50–100 node topologies.

PROJECTS

Forest Fire Prediction System **Sep 2024 – Dec 2024**
• Built ML pipeline using Random Forest + PCA, achieving 92% classification accuracy on NASA satellite/weather datasets.
• Deployed full-stack application (Flask + MySQL + Bootstrap) containerized with **Docker** on **AWS EC2**; simulated usage by 200+ municipal users.

Deepfake Detection System **Feb 2025 – Mar 2025**
• Trained hybrid CNN+LSTM model on FaceForensics++ dataset, achieving 93% test accuracy on image/video inputs.
• Exposed model via REST API (Flask); developed React frontend for real-time inference and result visualization.

HACKATHON ACHIEVEMENTS

Grab Hackathon — Top 11% (Top 500 / 4,539 Teams) **Mar 2025**
• Engineered real-time route optimization engine using Python, Flask, and Google Maps API; reduced estimated delivery time by 22% in simulation.

NASSCOM AI Hackathon — Top 300 / 3,500+ Teams **Expected Completion: Jul 2025**
• Developing NLP + Reinforcement Learning agent to automate enterprise document workflows; projected 40% reduction in manual routing time.