

# Nikhil Gupta

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## Professional Summary

Final-year B.Tech CSE (AIML) student with **9.46 CGPA (Dean's List)**. Strong expertise in **Machine Learning, Deep Learning, MLOps, and Data Analytics**. Experienced in building and deploying **production-grade ML systems** using FastAPI, Docker, and CI/CD pipelines. Seeking ML Engineer, MLOps Engineer, or Data Analyst roles to deliver scalable AI solutions in fraud detection, computer vision, NLP, and data validation.

## Education

**The NorthCap University, Gurgaon** — B.Tech Computer Science Engineering (AIML)

Expected Graduation: June 2026 | CGPA: 9.46 / 10 | Dean's List (CGPA > 9.5)

**Coursework:** Data Structures, Algorithms, OS, DBMS, AI, ML, Computer Networks, Statistics

## Technical Skills

**Languages:** Python, Java, C, SQL

**ML/AI:** TensorFlow, Scikit-learn, Pandas, NumPy, OpenCV, NLTK, Matplotlib

**MLOps/DevOps:** Docker, FastAPI, GitHub Actions, CI/CD, Model Deployment

**Tools:** Git, MySQL, Google Colab, IBM Cloud, Kaggle, VS Code

**Soft Skills:** Leadership, Problem Solving, Team Collaboration, Adaptability

## Professional Experience

### IBM – Machine Learning Operations & DevOps Fundamentals

Jun–Jul 2025

Student Trainee (Full-Time)

- Worked across the complete ML lifecycle including preprocessing, training, deployment, and monitoring.
- Implemented CI/CD pipelines using GitHub Actions and containerized ML services with Docker.
- Gained hands-on experience with API deployment, model versioning, and production MLOps workflows.

## Projects

### Real-Time Sign Language Interpreter

Sep–Nov 2025

*MediaPipe, TensorFlow/Keras, Python, NLP, Text-to-Speech*

- Built a real-time ASL interpreter using 21-point hand landmark extraction and MLP classifier achieving **99% accuracy**.
- Implemented 15-frame temporal stability logic for sentence formation and false-positive reduction.
- Integrated spelling correction, sentiment analysis, and non-blocking TTS.
- Achieved sub-100ms latency validated through real-user testing.

### Credit Card Fraud Detection System

Jun–Jul 2025

*Logistic Regression, SMOTE, FastAPI, Docker, GitHub Actions*

- Engineered a fraud detection model on 15K–18K transactions with class imbalance handling using SMOTE.
- Optimized F1-score and recall for real-time fraud scenarios.
- Deployed a FastAPI REST service with Dockerized CI/CD automation.
- Achieved sub-100ms inference latency in production.

### Deception Detection using TriadFusionNet

Feb–May 2025

*TensorFlow, Computer Vision, rPPG, Signal Processing*

- Developed a multi-modal deep learning architecture fusing facial embeddings, micro-expressions, and rPPG signals.
- Processed 10K–15K video samples achieving **83% accuracy**.
- Implemented Vec2Vec feature extraction and advanced signal preprocessing and normalization.

### Survey Response Quality Validation

Mar–May 2025

*NLTK, Scikit-learn, Random Forest, Gradient Boosting*

- Built an automated ML pipeline detecting biased, inconsistent, and low-quality survey responses.
- Reduced manual review workload by **70%**.

## Certifications & Achievements

Microsoft Azure AI-900 | IBM DevOps & Machine Learning Operations | Dean's List (CGPA > 9.5) | Top 50 – Gen AI Hackathon (Nov 2025) | SIH (Sep 2025)

## Leadership & Volunteering

### Sehyog Charitable Trust — Community Volunteer & Team Leader

Sep 2024–Oct 2025

Led food distribution, cleanliness drives, and tree plantation initiatives; coordinated 50+ volunteers.

### **Additional Highlights**

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Active GitHub with well-documented ML projects | End-to-end ML system development and deployment | Immediate availability