# Rhythm Gupta

+91 96432 51962 | rhythmgupta1602@gmail.com | linkedin.com/in/rhythm-gupta | github.com/rgperfect001

## Education

**University of Petroleum and Energy Studies** — Dehradun, Uttarakhand
*BTech in Computer Science, Artificial Intelligence (CGPA - 8.47)* — *Aug 2022 – May 2026*

**Delhi Public School Ghaziabad Vasundhara** — Ghaziabad, Uttar Pradesh
*Class 12th (CBSE - 80.8%)* — *May 2022*

## Experience

**Research Intern** — April 2024 – May 2024
*NIT Kurukshetra* — *Remote*

- •Optimized Convolutional Neural Network (CNN) architecture using the Differential Evolution Algorithm (DE), improving model performance by 5% and enhancing classification results.
- •Reduced computational time by 10% through parameter optimization and automation techniques, maintaining model quality while enhancing computational efficiency.

**Data Science Intern** — June 2024 – Aug 2024
*Airtel Digital* — *Gurugram, India*

- •Aided in the development and deployment of machine learning models, boosting prediction accuracy and model performance by 3% over previous iterations.
- •Deployed two machine learning solutions that enhanced operational efficiency: a forecasting model that boosted accuracy by 96% and an image blur detector that cut manual processing by 90%.
- •Designed and implemented a technical evaluation framework to assess third-party vendors, leading to the analysis of three systems against key performance and security benchmarks.

**AI Intern** — June 2025 – July 2025
*IBM* — *Remote*

- •Devised a novel emotion detection model by pioneering the application of the YOLOv11 architecture for real-time facial analysis.
- •Increased the core face detection accuracy by 6% over baseline models through rigorous training and validation on the large-scale AffectNet dataset.
- •Directed the end-to-end machine learning lifecycle, from initial model design and data preprocessing with 6 labels to final performance evaluation and optimization.

**AI Intern** — July 2025 – Present
*Agility AI Pvt Ltd* — *Remote*

- •Lead the development of two core AI products, spearheading projects in intelligent document processing and legal technology.
- •Architect an AI-powered invoice scanner to automate data extraction, and design an AI paralegal to enhance the efficiency of legal workflows.
- •Deployed machine learning algorithms for answer script evaluation, automating grading and enhancing objectivity; reduced grading time by 60% and improved inter-rater reliability by 25% based on human review.

## Volunteer Work

**Computer Teacher** — June 2023 – July 2023
*Sparsh Society* — *Ghaziabad, India*

- •Mentored 25+ underprivileged students (ages 10-14) in fundamental computer skills, designing and delivering a 2-month curriculum on MS Office.
- •Spearheaded two major community initiatives: a blood drive that collected 55 units and a campus-wide Yoga Day with 30+ attendees, overseeing all logistics, promotion, and volunteer coordination.
- •Produced, edited, and managed 5+ videos for the society's YouTube channel, resulting in over 3000 total views and establishing a key platform for digital outreach.

## Projects

**Multi-Tenant AI WhatsApp Chatbot**
*Conversational AI and Backend Development* *FastAPI, ChatGPT API, Webhooks*

- •Innovated a multi-tenant AI chatbot using FastAPI and the ChatGPT API, capable of handling 1,000+ concurrent messages with a sub-200 ms response time.
- •Implemented advanced prompt engineering techniques to achieve 95% accuracy in user intent recognition, successfully automating 80% of initial customer support inquiries.
- •Designed a multi-tenant backend architecture that reduced new business on boarding and integration time from 3 days to under 2 hours.

**AI-Powered Answer Script Evaluator**
*OCR and Machine Learning* *Python, OCR Libraries, Pandas*

- •Developed an OCR-based system to automatically extract and grade answers from student scripts for grades 2-12.
- •Engineered an automated evaluation engine to grade answer sheets, reducing manual grading time for teaching staff by 10+ hours per week and eliminating human error.
- •Validated the model on a dataset of 50 answer sheets, achieving a high degree of accuracy with a low scoring deviation of 4-5 marks.

**Graph-Based Environmental Monitoring**
*Neural Networks* *Java, Graph Neural Networks, SpringBoot*

- •Created an environmental monitoring system in Java, utilizing a Long Short-Term Memory (LSTM) model with 94.6% prediction accuracy for particulate matter (PM) levels.
- •Integrated user-friendly data visualization tools into the PM monitoring system, achieving a 40% reduction in alert fatigue among environmental scientists who now spend more time on intervention.

**Deep Fake Detection**
*Artificial Intelligence* *Python, Neural Networks*

- •Built a real-time deepfake detection API using Python and TensorFlow, allowing users to submit video content for instant analysis with 95% accuracy on the Celeb-DF benchmark dataset.
- •Achieved a high Area Under the Curve (AUC) score of 0.92 by iteratively refining the model, significantly reducing false positives compared to baseline implementations.

## Technical Skills

**Programming Languages**: Python, C++, C, Java, JavaScript

**Platforms**: Windows, Linux (Ubuntu)

**Libraries & Tools**: TensorFlow, PyTorch, NumPy, Pandas, Scikit-learn, OpenCV4, Git, Docker, Jira

**Databases**: MongoDB, MySQL, DynamoDB

## Certifications

- •Unsupervised Learning, Recommenders, Reinforcement Learning (DeepLearning.AI)
- •Advanced Learning Algorithms (DeepLearning.AI)
- •Python Certification (HackerRank)