RUPITH KUMAR N

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PROFESSIONAL SUMMARY

AI/ML Engineer proficient in Python, Deep Learning, Reinforcement Learning, and Quantum AI. Proven expertise in building LLMs, computer vision systems, and scalable backend architectures using PyTorch, TensorFlow, Django, and REST APIs. Research author and Smart India Hackathon team lead with demonstrated ability to architect production-ready AI solutions.

TECHNICAL SKILLS

Programming: Python, C, C++, Java, JavaScript, SQL

Frameworks: PyTorch, TensorFlow, scikit-learn, OpenCV, Django, React.js, Node.js

AI/ML: Deep Learning, RL (Q-Learning, DDPG, A3C, TD3), CNNs, NLP, LLMs, Computer Vision

Quantum: Qiskit, Deutsch, Deutsch-Jozsa, Quantum Neural Networks

Tools: Git, VS Code, Jupyter Notebook, Docker, Linux

Databases: MySQL, MongoDB, PostgreSQL

Cloud: Proficient in deploying ML models on Azure and GCP platforms

INTERNSHIP EXPERIENCE

ZetPeak Technologies — Python Developer Intern

September 2025 – November 2025 (3 Months)

- Engineered backend modules using Python and Flask/Django, implementing secure and optimized APIs
- Automated data-processing workflows, accelerating execution speed by approximately 40%
- Integrated ML-ready data pipelines for downstream analytics and model training
- Architected reusable utilities for logging, exception handling, and API versioning
- Collaborated with engineering team following Agile sprint methodology

AI/ML & Full-Stack Intern

August 2024 – January 2025

- Built comprehensive social media application utilizing React and Django REST Framework
- Designed and launched AI-powered recommendation algorithm for personalized content ranking
- Generated trending detection algorithms leveraging engagement analytics and user behavior patterns
- Managed backend architecture, API security, database queries, and performance optimization

SELECTED PROJECTS

AI Operating System (Research-Level Project)

Architected adaptive OS using Bellman Equation for resource optimization, biometric authentication, self-updating models, and VAE-based world model enabling autonomous system evolution.

Humanoid Ant — TD3 Reinforcement Learning

Trained continuous-control agent for robotic locomotion using Twin Delayed DDPG, achieving stable gait optimization and natural movement patterns.

200+ Language Translator (LLM-Based)

Constructed LLM-powered translation system with automatic language detection utilizing transformer embeddings and neural attention mechanisms.

Brain Tumor MRI Detector

Initiated CNN-based classifier with Grad-CAM heatmaps for precise tumor localization; implemented in PyTorch for medical diagnostic applications.

Quantum Neural Network for Fraud Detection

Pioneered hybrid QGAN + Quantum Reservoir Computing system for anomaly detection. Authored and submitted research paper documenting breakthrough findings.

Face & Object Recognition Suite

Implemented real-time detection system using OpenCV and CNNs for object recognition and tracking across multiple video streams.

RESEARCH & ACHIEVEMENTS

- Authored Research Paper: "Improvising Quantum Neural Network for Fraud Detection"
- Team Lead, Smart India Hackathon 2025 — AI Operating System project
- Constructed 10+ AI/ML models spanning RL, CV, NLP, and LLM domains
- Academic Performance: GPA 3.66/4.0 (91.4 percentile)

EDUCATION

B.Tech in Artificial Intelligence & Machine Learning

Garden City University, Bengaluru

Expected Graduation: 2026