

Munnam Rahul Vyas

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SUMMARY

Final-year B.Tech AI student with strong Python, ML, and deep learning skills. Experienced in developing production-ready AI systems, including chatbot development and quantum-security workflows. Proven ability to learn fast, work in teams, and deliver practical solutions through internships and project work.

EDUCATION

SRM Institute of Science and Technology <i>Bachelor of Technology – Artificial Intelligence; CGPA: 8.29</i>	<i>Chennai, India</i> <i>Sept. 2022 – Present</i>
Deeksha Junior College <i>Mathematics, Physics, and Chemistry; Percentage: 72.8</i>	<i>Visakhapatnam, India</i> <i>May 2020 – May 2022</i>

EXPERIENCE

Quentangle (UK Government Funded Project) <i>Product Developer</i>	<i>June 2025 – Jan. 2026</i> <i>Remote (London)</i>
<ul style="list-style-type: none">• Implementing Quantum Key Distribution (QKD) protocols using trusted-node architectures in the QAssure project.• Designing secure communication workflows and key management for multi-node quantum networks.• Collaborating with consortium teams to ensure protocol compliance and system interoperability.	

Quentangle <i>AI Intern</i>	<i>Sept. 2023 – April 2024</i> <i>Remote (London)</i>
<ul style="list-style-type: none">• Developed and deployed a GenAI chatbot capable of handling 200+ unique coding queries, streamlining the onboarding process for new developers on the Quentangle platform.• Engineered an automated error-correction and code-generation module, reducing manual debugging time for users by approximately 45%.• Implemented RAG pipelines using LangChain to improve chatbot accuracy and reduce hallucinations.	

TECHNICAL SKILLS

- **Programming:** Python, Java, C/C++
- **Machine Learning & Deep Learning:** Scikit-learn, TensorFlow, PyTorch, CNN, LSTM, PCA, DWT-based feature extraction
- **Generative AI & LLMs:** GPT-4, Llama, Retrieval-Augmented Generation (RAG), LangChain, Stable Diffusion, TTS models
- **Computer Vision:** OpenCV, YOLOv8/v11, image preprocessing & detection pipelines
- **Backend & Databases:** Flask, PostgreSQL, MySQL, MongoDB
- **DevOps & Tools:** Git, Docker, CUDA Toolkit
- **Core CS Concepts:** Data Structures, Algorithms, OOP

PROJECTS

Intelligent Machine Learning-Based Fault Prediction Model for Induction Motors

- Built ML models for classifying 16+ induction motor faults using ANSYS-simulated data; optimized features using PCA.
- Trained and evaluated 6 ML models (RF, SVM, DT, NB, LR, GB), achieving 95–98% accuracy with Random Forest outperforming others in F1-score and classwise precision.
- Published as a research paper and presented at ICAMC-2025.

Math Mentor: AI-Powered Math Tutor

- Built a multimodal AI math tutor integrating RAG and a Multi-Agent architecture via LangGraph to solve JEE-style problems.
- Engineered pipeline for OCR (PaddleOCR), ASR (Whisper API), symbolic evaluation (SymPy) and Human-in-the-loop verification.
- Leveraged Gemini 2.5 Flash and ChromaDB to verify solutions and persist records to memory for few-shot learning applications.

Fault Detection of DFIG-Based Wind Energy System Using ML

- Modeled a 9 MW grid-connected DFIG-based Wind Energy Conversion System (WECS) in MATLAB and generated dataset of 20,000 signal samples under 6 fault types (LG, LL, LLG, LLL, LLLG, healthy).
- Extracted features using DWT and trained 5 ML models; performed multi-class classification of 12 fault categories.
- Research paper accepted for presentation at iConSCEPT 2025 (NIT Puducherry); camera-ready IEEE paper under preparation.

HACKATHONS AND WORKSHOPS

- **Quantum Track Winner – Quantathon:** September 2023
- **Intel IOT Workshop:** March 2023
- **Intel Neural Networks Workshop:** March 2024
- **Intel Deep Learning Workshop:** March 2024

LANGUAGES

English, Telugu, Hindi