

ROHAN KUMAR K V

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EDUCATION

Sri Manakula Vinayagar Engineering College	
Bachelor of Technology • Artificial Intelligence & Data Science	
2023 - 2027 (current)	CGPA 8.29%
2022- 2023	
Sri Navadurga English hr. sec. School	Percentage 86%

TECHNICAL SKILLS

Programming Languages: Python, Java, C
Data Analysis: Pandas, NumPy
Data Visualization: Matplotlib, Seaborn
Database Management: SQL (MySQL), Supabase
API: RESTful API Integration
Technologies: Machine Learning, Deep Learning, NLP, RAG
Frameworks & Tools: Flask, Langgraph, Langchain, PyTorch
Dev Tools: Git, GitHub, VS Code,
Core Skills: Problem Solving, Critical Thinking

CERTIFICATIONS

- NPTEL certificate in Python for Data Science
- Microsoft Coursera certificate Introduction to Networking and cloud computing

AREA OF INTEREST

- Artificial Intelligence & Machine Learning
- Natural Language Processing
- Computer Vision
- Backend Development

ACHIEVEMENTS

- Selected in HackRxx Top 50
- Received Special Mention and Internship Opportunity at Techno-A-Thon

SUMMARY

Versatile and motivated AI & ML enthusiast with practical experience in backend development, data analysis, and intelligent systems. Skilled in Python, Flask, and machine learning frameworks, with a focus on NLP, Computer Vision, and automation. Passionate about leveraging AI and backend expertise to build innovative, data-driven solutions. Hands-on experience in designing AI pipelines, implementing RAG systems, and developing smart automation tools. Adept at integrating APIs, managing databases, and deploying AI solutions on cloud platforms. Strong problem-solving skills with a continuous learning mindset, eager to contribute to innovative projects and deliver real-world impact.

PROJECTS

Agentic RAG System

- Developed an autonomously thinking RAG system using an Ask-Observe-Reflect loop to iteratively refine queries and optimize retrieval strategies.
- Dynamically selects the best knowledge source—internal databases, research papers, or web searches—when answers are incomplete.
- Built a context-aware ingestion pipeline that intelligently structures and indexes both structured and unstructured documents for precise retrieval.
- Designed for scalability and adaptability, enabling seamless addition of new knowledge sources without retraining.
- Delivered a highly efficient, domain-agnostic solution capable of handling complex queries with minimal human intervention.

Mock Interview Chatbot with Grammar & Tone Analysis

- Developed an AI-driven mock interview system capable of real-time grammar correction and formality detection.
- Designed an error-highlighting mechanism that visually marks grammatical issues within user responses for easier learning.
- Delivered as a Flask API, enabling easy integration into web or mobile platforms for scalable deployment.

AI-Based Driver Assistance System

- Developed an AI-driven driver assistance system using dashcam footage to detect fog and enhance visibility in low-light conditions.
- Utilized YOLOv8 for real-time object detection and fog identification, combined with Zero-DCE image enhancement techniques to improve scene clarity.
- Designed to operate sensor-free, relying solely on deep learning and computer vision to provide safety-critical insights.
- Implemented distance and speed estimation of vehicles using camera-based methods, enabling proactive alerts for collision avoidance.