MUCHINTHALA VISHNU VARDHAN NAIDU

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Summary

B.Tech CSE graduate specializing in Machine Learning, Generative AI, and LLM applications. Built and deployed a multi-agent RAG pipeline using LangChain, FastAPI, and FAISS, and deployed ML models through REST APIs. Proficient in Python, FastAPI, and SQL. Seeking entry-level Software Engineer or AI/ML Engineer roles.

Technical Skills

- **Programming Languages:** Python, JavaScript, SQL, HTML5, CSS3
- **AI/ML & GenAI:** Machine Learning, Generative AI, LLMs, RAG, LangChain, Prompt Engineering, AI Agents, Vector Database (FAISS), Hugging Face Transformers
- **Libraries:** NumPy, Pandas, Scikit-learn, XGBoost
- **Frameworks & Tools:** FastAPI, Flask, REST APIs, Git, GitHub, Postman
- **Cloud & Databases:** MySQL, Render, Docker, AWS (Basics)
- **Core Concepts:** Data Structures & Algorithms, OOP, DBMS, Operating Systems, REST API Design

Work Experience

ThopsTech Career Solutions **Bangalore, India**
AI & Machine Learning Intern Mar 2026 – Present

- Developed Python-based machine learning workflows using Scikit-learn for data preprocessing, exploratory analysis, and model evaluation on real-world datasets.
- Applied supervised learning techniques including regression and classification, comparing model performance using accuracy and relevant evaluation metrics.
- Prepared structured datasets using Pandas and NumPy for machine learning model training and evaluation.

Talent Trek E-Learning **Bangalore, India**
Data Science Intern Jun 2025 – Aug 2025

- Processed and analyzed datasets using Python, Pandas, and NumPy, performing end-to-end data collection, cleaning, exploratory analysis, and visualization.
- Created data visualizations to uncover patterns and trends, and applied machine learning methods to extract insights that supported decision-making.

Projects

SolarNet Pro — Solar Radiation Prediction System GitHub | *Python, Flask, Random Forest, XGBoost, REST API*

- Built a full-stack ML web app predicting solar radiation using Random Forest & XGBoost on real meteorological datasets with optimized hyperparameters.
- Developed and deployed a Flask REST API with CORS handling, input validation, and end-to-end model serving pipeline.
- Implemented a multi-layer backend fallback system to ensure uninterrupted predictions during API failures.
- Designed an interactive frontend with Chart.js visualizations showing real-time predictions, model confidence, and feature importance.

Multi-Agent Research Assistant GitHub | *Python, FastAPI, LangChain, FAISS*

- Designed a 4-agent RAG pipeline (Planner, Researcher, Summarizer, Report Generator) that decomposes research queries into sub-tasks and synthesizes a structured report, with per-agent error isolation so a single agent failure doesn't crash the request.
- Built a document ingestion pipeline (PDF/DOCX/TXT → chunking → FAISS vector store) using Gemini API embeddings to enable grounded question-answering over user-uploaded documents.
- Implemented automatic 4-provider LLM fallback (Gemini, OpenAI, Groq, DeepSeek) so the app stays responsive during rate limits or provider outages, instead of failing the request.
- Wrote a pytest suite covering pipeline orchestration and API validation; deployed the application live on Render.

Education

- **NBKR Institute of Science and Technology** **2022 – 2026**
  B.Tech in Computer Science and Engineering; CGPA: **8.19/10**
- **Sri Chaitanya Junior College** **2020 – 2022**
  Intermediate; Percentage: **86.8%**

Achievements

- **Certifications**: Full Stack Development (Simplilearn SkillUp), AI & Machine Learning (INNOVATE by HEXAIND), Data Science (Talent Trek E-Learning), Artificial Intelligence (AICTE).