

NIKHIL KUMAR VYAMSANI

Hyderabad, TS

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About Myself

Passionate about learning and exploring new technical and non-technical skills. I approach every role with adaptability and responsibility, aiming to contribute effectively while continuously growing professionally.

Technical Skills

- **Languages:** Python, R (Basics) SQL, JavaScript, Java(Core Java)
- **Backend/DevOps:** FastAPI, Flask, Docker, Kubernetes, Prometheus, CI/CD
- **AI/ML:** LangChain, Ollama, TensorFlow, Keras, CNNs, NLP, OpenCV, Pandas, Numpy
- **Databases:** MySQL, SQLite, NoSQL
- **Frontend:** Streamlit, Gradio, Grafana, HTML/CSS, Leaflet.js

Experience

Seekright AI

Python Backend & AI Engineer Intern

Feb 2025 – Aug 2025

Bengaluru, KA

- Designed an **LLM-powered NLP assistant** using LangChain + Ollama to translate natural language into SQL, integrated with Pandas-based pipelines for anomaly detection and site statistics.
- Built a **GPS trajectory AI pipeline** for cleaning noisy data, AI-based tunnel simulation, and map-matching with OSRM.
- Developed a **Monitoring Platform** with Prometheus integration, validating data against MySQL.
- Automated HR attendance workflows by integrating Dockerized OrangeHRM with Python ETL pipelines, reducing manual effort.
- Created real-time dashboards and optimized video/GPS processing with OpenCV & ExifTool, achieving 30% faster performance.

Accenture Solutions Pvt Ltd (Client: AIG)

Associate Software Engineer

June 2021 – Feb 2022

Hyderabad, TS

- Developed and maintained a **claims management system** to streamline end-to-end policyholder workflows.
- Built secure **Flask applications** with JWT authentication and implemented **FastAPI services** for real-time claims analytics, including fraud detection and SLA monitoring.
- Optimized **MySQL queries and schemas** for large datasets and containerized applications using Docker, improving efficiency and scalability.

Key Projects

- **DBLLM – AI SQL Assistant:** Built an **LLM-powered SQL assistant** using **LangChain + Ollama (LLaMA3)** to convert natural language into SQL queries. Designed an interactive **Streamlit + Plotly dashboard** with filters, FAQs, and pagination for anomaly audits and site statistics. Integrated **MySQL backend**, **APScheduler**, and deployed via **Docker**, improving query efficiency by 25%. [GitHub]
- **GPS Trajectory Processing:** Engineered a **Python-based GPS trajectory AI pipeline** for noisy data cleaning, tunnel simulation, and **map-matching (OSRM)**. Built preprocessing workflows using **Pandas + NumPy** and delivered insights via **Streamlit + Plotly dashboards**, reducing data processing time by 30%. [GitHub]
- **Rice Disease Prediction:** Built a **CNN-based deep learning model** with **TensorFlow & Keras** to classify rice leaf diseases (**Brown Spot, Leaf Blast, Bacterial Leaf Blight, Healthy**). Preprocessed datasets with **OpenCV** and applied **image augmentation**. Converted the trained model to **TensorFlow Lite (.tflite)** for edge deployment. [Kaggle Dataset] [Notebook]
- **Centralized Monitoring System:** Developed a **monitoring and data integrity platform** for distributed video/GPS pipelines using **Prometheus + Grafana** for real-time metrics, anomaly alerts, and visualization. Optimized Python ETL workflows for MySQL validation, improving monitoring reliability by 30%. [GitHub]

Education

University of Maryland, Baltimore County (UMBC) — Master's in Computer Science 2022–2024, GPA: 3.2/4.0

GITAM University — B.Tech in Computer Science 2017–2021, GPA: 8.2/10

Certifications

- Udemy – Machine Learning A-Z: AI, Python & R Sept 16, 2020
- Coursera – Python Data Structures, Univ. of Michigan Jun 23, 2020
- Coursera – Programming for Everybody, Univ. of Michigan May 18, 2020
- Udemy – Complete Python Bootcamp: Go from Zero to Hero in Python Apr 10, 2020