Adinath Khamkar

+919967609672 adinathkhamkar@yahoo.com LinkedIn Github Leetcode

PROFILE SUMMARY

Machine Learning Engineer with **2 years** of experience in **Generative AI**, **Computer Vision** and **MLOps**. Proficient in **Object Detection**, **LLMs** and deploying scalable solutions on cloud platforms.

TECHNICAL SKILLS

Languages: Python, C++, SQL.

ML & DL Models: Large Language models, Deep learning (CNN, RNN), YOLO, Random Forest, XGBoost, KNN, SVC, K-Means Clustering, DBSCAN, Principal Component Analysis(PCA).

Libraries: Huggingface, TensorFlow, Keras, Pytorch, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, NLTK, MLflow, fb prophet.

Database: MySql, MongoDB, PostgreSQL.

Backend Development: Flask, FastAPI.

MLOps: DVC, MLFlow, Docker, AWS(EC2,ECR,ECS,BedRock), Git, GitHub.

EXPERIENCE

UniConverge Technology | *ML Engineer* Oct 2023 – Present
Noida,Uttar Pradesh

- Led the development of an AI-powered assessment builder using **LangChain and LangGraph** to generate structured MCQ and descriptive questions for seamless **Google Forms** integration, with question-specific **rubrics** that automate response evaluation.
- Developed **MIRA** (Mock Interviewer and Revision Assistant) using generative AI with **LangChain** and **LangGraph** for task-specific question generation. Implemented **persistent memory** in the agent to prevent question repetition and enhance question diversity
- Conducted time series analysis and developed predictive models for inventory management, achieving an average **MAPE score of 15%** . Implemented **MLOps** for dynamic model training and automated periodic retraining to enhance operational efficiency and reducing inventory costs by **20%**.
- Trained an object detection model using the **YOLO** algorithm and implemented model **quantization** to optimize inference for edge devices (e.g., NVIDIA Jetson), achieving a 30% increase in processing speed with minimal mAP drop.

PROJECTS

1] Agentic RAG | *Link*

- Developed an **Agentic Retrieval-Augmented Generation** (RAG) pipeline using **LangGraph** and **ChromaDB** to dynamically retrieve, chunk, and semantically search documents for context-aware answers.
- Implemented intelligent relevance evaluation and query rewriting to improve retrieval precision, with fallback logic to skip ChromaDB searches for out-of-domain questions, optimizing LLM efficiency and cost

2] License plate recognition using CNN | *Link*

- Built a real-time license plate recognition system using **YOLOv10** for detection and **PaddleOCR** for text extraction, achieving an **mAP50 of 86%.**
- Designed a workflow to store timestamped license plate data in **JSON** and **SQLite**, allowing customizable detection intervals and thresholds.

EDUCATION

University Of Mumbai Jul 2022
M.Sc. Physics and Electronics *CGPA: 8.2/10*

D.G.Ruparel College of Arts,Science and Comm. June 2020
B.Sc. Physics *CGPA: 7.49/10.0*

Coursework: Object-Oriented Programming, Data Structures & Algorithms, Discrete Math, Linear Algebra, Calculus, Physics, Probability & Statistics