Kishor Timilsena

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Professional Summary

Highly motivated AI/ML engineering candidate with robust project experience in Deep Learning, Computer Vision, and NLP, skilled in building end-to-end ML pipelines. Proficient in Python, PyTorch, and Advanced MLOps practices including Dockerization, FastAPI development, and scalable system architecture thus seeking challenging production based AI engineering roles.

SKILLS SUMMARY

- **Programming Languages :** C , C++ , Python , SQL
- **Ai/ML Frameworks :** PyTorch, Open-CV, Langchain, Scikit-Learn, Pandas, Numpy, Matplotlib ,
- **Tools :** Docker, Git/Github, CI/CD (Github Actions) , Fast API, MLflow, DVC, MySQL, SQLite,
- **Key Domains :** Data Science , AI/ML ,Deep Learning , Computer Vision, NLP (RAG & LLMs), MLOps

PROJECTS

1. RAG-Document Q&A and Booking System| [Link]

Technologies Used : FastAPI, Docker (CI/CD), LangChain, Groq API , Qdrant, Redis, SQLite, GitHub Actions.

- **Engineered** a production-ready **Retrieval-Augmented Generation (RAG)** system using **FastAPI** for Q&A over custom documents with source citations.
- **Designed** a scalable backend architecture utilizing **Qdrant** for vector search, **Redis** for conversation memory, and **Docker/GitHub Actions** for automated CI/CD deployment.
- **Implemented** natural language processing features for entity extraction using Groq's LLM, facilitating a seamless appointment booking system from plain text.

2. Driver Drowsiness Detection | [Link][Paper]

***Technologies Used: Python, OpenCV, YOLOv8, Faster R-CNN, CNN, PyTorch, TensorFlow, Keras, LabelImg, Agile*.**

- **Benchmark-tested** YOLOv8, Faster R-CNN, and CNN architectures for real-time detection of facial regions (eyes, mouth), achieving up to **98% accuracy** in live scenarios.
- **Curated and annotated** a custom dataset of **thousands of frames** using **LabelImg** to train robust models, significantly reducing false positives in low-light conditions.
- **Integrated** the optimized model into a lightweight, webcam-based Python GUI application, featuring audio warnings and following **Agile** practices for iterative improvement.

3. Vehicle Insurance Prediction | [Link]

Technologies Used : Python, Scikit-learn (Random Forest), Pandas, Fast API, Docker, CI/CD (GitHub Actions), MongoDB.

- **Developed** an end-to-end ML pipeline using **Random Forest** to predict vehicle insurance renewal, performing comprehensive evaluation using accuracy, precision, recall, and F1 score.
- **Containerized** the prediction service using **Docker** and exposed the API via **FastAPI**, creating a real-time interactive user interface for predictions.
- **Automated** the deployment workflow leveraging **GitHub Actions for CI/CD**, ensuring continuous integration and efficient updates of the application.

EDUCATION

Bachelors in Computer Engineering, Khwopa College of Engineering, TU ,Nepal **2022-2026(April)**

CERTIFICATIONS

Data Science with Python | Link *2024*

Deep Learning with Python :Foundation and Application (45 hours) | Link *2025*