

TANVI KULKARNI

AI/ML engineer

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SUMMARY

I am Dedicated AI/ML Engineer with expertise in designing and deploying cutting-edge machine learning and computer vision solutions. I bring hands-on experience in developing AI-driven tools for diverse use cases, including object detection, natural language processing, and retrieval-augmented generation RAG systems. Proficient in leveraging frameworks like PyTorch, Huggingface, and YOLO, I excel at building scalable APIs using FastAPI and integrating robust backend systems with PostgreSQL and Streamlit. Passionate about staying at the forefront of AI advancements, I thrive in solving complex problems through innovative approaches. With a proven track record of delivering impactful projects, I am eager to contribute my skills to drive technical excellence and achieve organizational success.

EXPERIENCE

08/2024 - Present
Surat, Gujarat

Ai/ML engineer
LOGICWIND



Web and mobile app development company

- Contributed to various AI-driven client projects, including **Graphology**, an AI-based handwriting and signature analysis tool for personality detection (leveraging YOLO models, Google Text Detection API, and Streamlit); **Terramatic**, an AI application for road safety and road sign detection (utilizing object masking, object detection models, Google Maps API, and slope detection); and **InspectAI**, a FastAPI-powered tool for detecting wall cracks and damages to assist inspectors, involving image preprocessing, post-processing, and damage visualization.

12/2023 - 08/2024
Surat, Gujarat

Ai/ML intern
LOGICWIND



Web and mobile app development company

- Worked on computer vision related project and image pre processing concepts
- Experience with the ML libraries such as Pytorch, Huggingface, Opencv, scikit learn, Ultralytics etc.
- Concept of YOLO model training.
- Fine tuning of ML models.
- Testing of text to video LLM's
- Object detection, segmentation and classification model training and testing.
- Created the RAG project using pydantic model and Open Ai's chat completions integration
- Created the chatbot which gives answers based on the knowledge base given in json, using langchain and openai.
- Used gaurdrail for similar project to maintain the security of the users question
- Used fastapi for creating the apis
- Employe management system using streamlit for frontend and posgre for database management.
- Contributed on project like ConveneAi for creating the RAG system and prompting.

EDUCATION

06/2017 - 05/2020

Bachelor in Computer Application
Veer Narmad South Gujarat University

09/2021 - 10/2023

Masters in Computer Application specialized in Artificial Intelligence
Jain University

SKILLS

Python Programming	Machiene Learning		Deep Learning	NLP	FastAPI	Streamlit	
AI Model Training (Fine-tuning & Customization)			YOLO (Object Detection & Classification)			Computer Vision	
Image Preprocessing	PyTorch	Huggingface	OpenCV	ML Liabraries		Scikit-learn	Ultralytics
RAG (Retrieval-Augmented Generation)		Pydantic	OpenAI	LangChain	Guardrails	PostgreSQL	
Prompt Engineering	Chatbot Development						

PROJECTS

graphology

Contributed on the client project named Graphology which is the AI application which detects the personality of person based on its handwriting and signature style

- Streamlit application for graphology.
- training and fine tuning the YOLO object detection and classification model.
- Detection of signature type in writeup for personality detection.
- Preprocessing and post-processing image
- Integration of google text detection api and processing results.

terramatic

Contributed on the client project named terramatic which is the AI application that is used for road safety and the road sign detection.

- Used object masking for road and turn detections
- Detection and classification of the road signs
- Post-processing of annotated and detected images
- Extra ting the coordinates of road using google map api and detecting whether the village road or national highway road has slope or not.

inspectAI

Worked on the project named inspectAI which is an AI tool which helps detecting the cracks and other wall damages which is helpfull for wall inspectors.

- Detecting the damaged wall portion and creating the image of it.
- used the fast api for creating the projects api.