Mahesh Ramesh Kandekar

Location: Pune , Maharashtra, India
Mobile: +91 8080810575 Email Kandekarmahesh6@gmail.com
LinkedIn — Github — Portfolio

PROFESSIONAL SUMMARY

AI/ML and Generative AI enthusiast with hands-on experience in computer vision, deep learning, and chatbot development. Proven ability to build real-time intelligent systems for industrial automation and customer interaction. Seeking AI/ML Engineer or GenAI Developer roles to apply innovative problem-solving in impactful projects.

EXPERIENCE

- **AI Intern – R&D Team - Yantrik Technology**
  JAN 2025 – Present | Pune, Maharashtra
  - Building AI-powered visual inspection systems using Python, OpenCV, and deep learning (YOLO, R-CNN) to detect defects in automotive components.
  - Designed real-time inspection tools and dashboards for assembly verification, sealant detection, and light quality analysis.
  - Developed GenAI-based customer service agents to handle inquiries and provide automated support using LLMs.
  - Working on end-to-end AI solutions from data collection, model training to deployment, with integration into industrial systems (PLC, SQL).
  - Contributing to research, prototyping, and productization of AI models within the R&D team.

Key Projects

1 : AI-Based Visual Inspection System for BIW Parts

- Built a visual inspection system using deep learning and OpenCV to detect missing/misplaced features (holes, bolts, slots) on BIW parts.
- Developed Flask-based desktop app for real-time inspection.
- Applied models like YOLO, Faster R-CNN for defect detection.
- Tools: Python, OpenCV, Flask, TensorFlow/PyTorch, LabelImg

2 : AI-Based Sealant Detection System

- Designed a system to inspect sealant presence, color, and placement on metal parts.
- Used HSV filtering, contour analysis, and YOLO for accurate detection.
- Created real-time inspection UI using Flask.
- Tools: Python, OpenCV, Flask, LabelMe, HSV, YOLO

3 : Light Intensity & Chromaticity Inspection System

- Developed a system to assess car light brightness and chromaticity (OK/NG classification).
- Used RGB to CIE Lab/HSV conversion and intensity mapping.
- Built GUI with Tkinter/Flask for result display.
- Tools: Python, OpenCV, NumPy, Matplotlib, HSV, CIE Lab

- **Data Science Developer Intern** , **NullClass**
  Jan 2024 - May 2024
  - Built a real-time emotion detection system using facial expression analysis and deep learning.
  - Implemented computer vision pipelines for live video emotion recognition using OpenCV and CNN models.
  - Worked on data preprocessing, augmentation, and model evaluation to improve accuracy.

- **Data Analyst Intern MedTourEasy**
  May 2024 - Jun 2024
  - Conducted statistical analysis on age of death data based on handedness.
  - Explored correlations between right-handed and left-handed individuals using Python (Pandas, NumPy).
  - Delivered insights through data visualization using Matplotlib and Seaborn.

SKILLS

- **Programming Language** : Python , Java
- **Core AI & ML** : TensorFlow,Keras PyTorch, Scikit-learn
- **Generative AI** : OpenAI GPT, LangChain, LangGraph, LlamaIndex, RAG, Prompt Engineering
- **NLP** : Transformers (BERT, GPT), NER, Text Classification, Sentiment Analysis
- **Computer Vision** : OpenCV, YOLO, Feature Matching, Real-time Detection
- **Web & Deployment**: Flask, FastAPI, Streamlit, RESTful APIs
- **Data Handling**: SQL, MongoDB, Pandas, NumPy
- **Tools**: Git, Docker (basic), Jupyter, VS Code, Google Colab

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EDUCATION

- **Master in Computer Science – Jun 2023 – April 2025**
  SMBST College Sangamnear
- **Bachelor in Computer Science – Jun 2019 – April 2022**
  SMBST College Sangamnear CGPA: 8.3

PROJECTS

1 : UPI Payment Fraud Detection

- system aimed to detect and prevent fraud in UPI transactions, using the Random Forest algorithm in Python.
- Achieved 92% accuracy in identifying suspicious transactions by analyzing patterns and flagging potential fraud.
- Created a user-friendly interface with HTML, CSS, and Flask for seamless management and real-time monitoring of transactions.

2 : Customer Support Chatbot

- Developed an AI-powered chatbot using **LangChain** and **Flask** to handle customer queries with natural language understanding.
- Integrated a **responsive frontend** using **HTML, CSS, and JavaScript** for seamless real-time chat interactions.
- Enabled **context-aware responses** and **prompt management** to enhance support accuracy and user experience.

PERSONAL DETAILS

- **Date of Birth**: 13th May 2001
- **Languages Known:** English, Hindi and Marathi
- **Address:** Pune, Maharashtra