Tharun K

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Education

KPR INSTITUTE OF ENGINEERING AND TECHNOLOGY — Oct 2021 – Present
B.E Electronics and Communication Engineering — ***CGPA: 8.6***

KONGU VELLALAR MATRICULATION HIGHER SECONDARY SCHOOL — June 2019 – May 2021
Higher Secondary Education — ***Percentage: 92.5%***

Internship Experience

Kapture CX — **March 2025 – Present**
Machine Learning Engineer Intern
- Developing customized chatbots and audiobots for internal applications to enhance product functionality. These AI-driven solutions improve user interaction, automation, and overall efficiency within the system.

Turing — **June 2024 – Jan 2025**
Delivery Data Analyst Intern
- Collaborated with top-tier clients (OpenAI, Google, Meta) to deliver high-quality data for Supervised Fine-Tuning (SFT) and Reinforcement Learning with Human Feedback (RLHF) tasks, ensuring optimal AI model training.
- Optimizing function calling within Large Language Models (LLMs), improving model interactions and performance.

WEC AI — **June 2023 – Sep 2023**
Data Scientist Intern
- Building an AI community and advising small scale businesses on AI product strategy. Developed ML model for Custom document Q/A Chatbot using langchain and GPT.
- Worked closely with teams to integrate AI-driven solutions into existing workflows, optimizing performance and enhancing business efficiency for small-scale enterprises.

Projects

Custom RAG-Based Document Q/A Chatbot | *Python, LLMs, Langchain, FastAPI, Google-Gemini, Vector-DataBase*
- Built an API using LangChain and Gemini 1.5 flash, which acts as a custom chatbot for user documents, leveraging powerful LLMs and providing valuable insights to stakeholders.
- This model applies to real world solution for lawyers to retrieve specific content from a contract easily.

Campus Guard using YOLOv8 Model | *YOLOv8, Object Detection, Face Recognition*
- Campus guard employs YOLOv8 to detect instances of individuals without helmets or triples on campus premises.
- Through this innovative implementation, our system promptly notifies the respective department staff members upon detecting violations.

Leaves Disease Classification using CNN | *Convolutional Neural Network (CNN), Flask*
- Developed and implemented a CNN-based model for accurate classification of potato leaves diseases, demonstrating proficiency in applying cutting-edge deep learning techniques to address real-world agricultural challenges.
- Fine-tuned the model to enhance accuracy and robustness, ensuring consistent and reliable disease detection.

Fingerprint Recognition System using SIFT | *SIFT Algorithm, OpenCV, FLANN*
- Developed a fingerprint recognition system using SIFT and FLANN-based matcher, achieving high accuracy in matching fingerprints.
- A scalable solution that processes multiple fingerprint images from a database efficiently, demonstrating real-time matching capabilities with a high accuracy rate.

Technical Skills

Languages: Python, Java
Backend Frameworks: FastAPI, Flask, Django
ML Frameworks: Pandas, Numpy, Matplotlib, LangChain, Tensorflow, Scikit-Learn, Langgraph
Developer Tools: Git, GitHub, VSCode, Postman

Achievements

- Selected among 270 teams for stage 2 of e-Yantra robotics competition by IIT Bombay.
- Won 1st Prize in Build Mania conducted by Nasscom.
- 1st Prize in Line Follower Event conducted by IIST Kerala.
- Published an own Python package named FingerprintMatcher.