Harsha Upadrasta

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Synopsis

Detail-oriented and ambitious engineering student seeking an entry-level position in the software industry.

Education

Woxsen University, B.Tech in Computer Science and Engineering — 2021 – 25
- Hyderabad, Telangana. GPA: 3.0/4.0

Delhi Public School, Higher Secondary Education, CBSE — 2019 – 21
- Vijayawada, Andhra Pradesh.

Experience

Data Science Intern, Flyers Soft Pvt Ltd, Chennai — Feb 2024 – Jun 2024
- Developed an AI-powered Medical Virtual Assistant for an internal project, integrating RAG model with Llama2 and Sentence Transformers from Hugging Face.
- Designed and implemented a Vector Database (Vector DB) for efficient storage and retrieval of embeddings.
- Utilized CTransformers for text-based conditions and employed Langchain as the framework for model orchestration.
- Deployed the project in Chainlit, ensuring seamless user interaction and response generation based on medical history.
- Performed Data Cleaning, Vector DB creation, Evaluation, and Validation to enhance model performance in a production-level environment.

Projects

Aspect-Based Sentiment Analysis — Jul 2024 – Dec 2024
- Built a chatbot using the Groq API and Llama 3.1 LLM to analyze Twitter reviews, providing insights and generating overall summaries.
- Utilized Mistral AI, Llama, and BERT to extract and generate aspects for sentiment analysis.

Plant Disease Detection & Pesticide Recommendation (Conference Paper Submitted) — Jan 2024 – Apr 2024
- Built a Flask application to detect plant diseases and recommend pesticides.
- Utilized Pytesseract, TensorFlow, Keras, NumPy, Pandas, and OpenCV for image processing and disease classification.
- Designed a user-friendly interface for real-time plant health assessment.

Smart Parking System — Aug 2023 – Nov 2023
- Developed a Flask-based parking management system with vehicle check-in, check-out, and real-time occupancy tracking.
- Integrated OpenCV for vehicle detection, Tesseract OCR for license plate recognition, and Imutils for image processing.
- Designed an admin dashboard with a web interface, leveraging NumPy and Pandas for data handling and analysis.

Skills

Languages: Python, SQL.

Technologies & Frameworks/ Libraries: Data Processing & Analysis (Pandas, NumPy), Machine Learning & Deep Learning (TensorFlow, Keras, PyTorch), Generative AI & NLP (LangChain, LLMs, Vector Databases), Computer Vision & Object Detection, OCR & Text Extraction (Tesseract).