Harshit Tiwari

tiwariharshit990@gmail.com   +91 9793910504   LinkedIn   GitHub

Summary

Passionate AI/ML engineer with a strong background in deep learning, computer vision, and natural language processing. Skilled in Python, TensorFlow, PyTorch, and various ML libraries. Excellent problem-solving, research, and collaboration abilities. Seeking a challenging role to develop cutting-edge AI solutions.

Technical Skills

Programming Languages : Python , C++ .

Machine and Deep Learning Frameworks :Supervised Learning (Regression, Classification), Unsupervised Learning (Clustering, Dimensionality Reduction),Data Preprocessing (Missing Values, Normalization, Encoding) , Prompt Engineering (Zero-shot, Few-shot, Chain-of-thought).

Libraries & Tools: NumPy, Pandas, Scikit-learn, OpenCV, TensorFlow, PyTorch, Flask, NLTK.

Projects

Plant Disease Detection & Fertilizer Recommendation
Technologies used: TensorFlow, Flask, Python, Google Colab
• Performed data augmentation (rotation, flipping, zooming) and resized leaf images to 256x256 pixels for model.
• Built a CNN architecture with dropout and batch normalization to reduce overfitting during training.
• Trained the model to classify 15+ plant diseases and mapped predictions to fertilizer recommendations using rule-based logic.
• Deployed with the Flask with a simple upload interface tailored for farmers.

Mask and Facial Expression Detection
Technologies used: Python, TensorFlow, OpenCV, Flask
• Collected and resized face image data; removed blurry or incomplete entries for consistency.
• Applied OpenCV-based face detection and trained a CNN to classify emotions (angry, sad, neutral, surprised).
• Integrated the model into a Flask web app for real-time prediction.
• Monitored model performance metrics such as precision, recall, and F1-score for each emotion class.

Breast Cancer Prediction Model
Technologies used: Scikit-learn, Pandas, NumPy, Matplotlib
• Removed irrelevant columns, handled missing values, and normalized feature data from a medical dataset.
• Applied feature scaling using StandardScaler to improve model performance.
• Trained a Logistic Regression model for binary classification (benign vs malignant) with 85% accuracy.
• Compared Logistic Regression with SVM and Random Forest to choose the best-performing model.
• Implemented cross-validation (k-fold CV) for model generalizationa, Generated confusion matrices and classification reports.

Education

VIT Bhopal University, Bhopal, Madhya Pradesh	May 2027
BTech in Computer Science, Cumulative GPA: 8.16	
Singhania Educational Institute, Sitapur, Uttar Pradesh	July 2023
12th Standard (CBSE), Percentage: 84.6%	
Singhania Educational Institute, Sitapur, Uttar Pradesh	July 2021
10th Standard (CBSE), Percentage: 73%	

Certifications

Prompt Engineering (Deepearning.AI), Computer Vision (Kaggle), Intro to Deep Learning (Kaggle), Generative AI Foundations (Infosys), Intro to Generative AI (Coursera), Machine Learning, Python and ChatGPT (Udemy).