Tushar Ahire

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Summary

Detail-Oriented B. Tech student specializing in AI/ML, with experience in emotion recognition and NLP pipelines. Proficient in deep learning frameworks like TensorFlow and keras , and tools such as OpenCV and NLTK. Excited by real-world challenges.

Education

Mukesh Patel School of Technology Management and Engineering, NMIMS University – B.Tech in Artificial Intelligence & Machine Learning — Sept 2022 – Aug 2026

- CGPA: 2.7/4.00 (Till 5th Semester)
- **Relevant Coursework:** Machine Learning, Deep Learning, NLP, Data Wrangling ,natural language Processing .

Experience

I haven't had the opportunity to do an internship yet, but I've been actively building my skills through personal projects, online courses, and practical hands-on work. I'm very motivated to apply what I've learned in a professional setting and eager to contribute and grow through real-world experience.

Projects

Sentence Senitment prediction using NLP

- Built a Sentence Sentiment Analysis model using Natural Language Processing (NLP) to classify text as Positive, Negative, or Neutral.
- Preprocessed text data using tokenization, stopword removal, and TF-IDF/word embeddings for feature extraction.
- Trained models using Logistic Regression, LSTM, and BERT, achieving up to 94% accuracy on benchmark datasets.
- Implemented using Python, Scikit-learn, TensorFlow, and NLTK/spaCy, with a simple UI for input and real-time prediction.

Historic image conversion into modern image(RGB) using GAN

- The project converts old grayscale historic images into realistic RGB color images using Generative Adversarial Networks (GANs).
- It uses a U-Net-based generator and a CNN discriminator, trained on RGB image datasets by converting them into grayscale inputs.
- Implemented using Python, TensorFlow, and OpenCV, the model learns colorization by combining adversarial loss with pixel-wise loss.
- The model achieved an accuracy of ~88% SSIM (Structural Similarity) and ~30 dB PSNR, producing high-quality and visually accurate colorized images.

Content-Based Movie Recommender using TMDB Dataset — GitHub

- Developed an AI-powered real-time sign language recognition system using YOLOv5 for gesture detection and CNN-based classification for prediction.
- Utilized Deep Learning (DL) and camera-assisted input to detect hand signs for deaf communication with high accuracy and minimal latency.
- Integrated OpenCV, PyTorch, and YOLO object detection for real-time video stream processing and hand tracking.
- Achieved ~92% accuracy in dynamic gesture classification across a custom dataset of ASL signs using optimized model training and augmentation.

Technologies

Languages: Python, SQL, C++

Frameworks & Libraries: TensorFlow, keras , theana , Scikit-learn, OpenCV, NLTK, Pandas, NumPy, Matplotlib

Tools & Platforms: Google Colab, Jupyter, Git, Docker, VS Code, Anaconda, Autocad, Cloudera, Tableau,PowerBI.