UTKARSH YADAV

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Education

Jaypee University of Engineering & Technology Guna (M.P), India	**2022 - 2026**
• Branch | CGPA: **8.1/10**	(expected)
H.A.L Vidyalaya Kanpur (U.P), India	**2018 - 2019**
• *CBSE (Class X), Percentage:90*	
• *CBSE(Class XII), Percentage:87.2*	**2020 - 2021**

Skills

C++ | C | Java | Python | Machine Learning | Deep Learning | Natural Language Processing (NLP)| Flask | MongoDB |

Computer Vision (Tensorflow,Keras,PyTorch) | Statistics | MySQL | Git | Docker | AWS | Github

Projects

Object Tracking   **LINK**
YOLOv5 and DeepSORT system for real-time multi-object tracking with high reliability.

- Developed an advanced object tracking system by integrating YOLOv5 for real-time object detection and DeepSORT for robust multi-object tracking.
- Leveraged deep learning techniques to achieve high accuracy in object detection, employing Convolutional Neural Networks (CNNs) and transfer learning methodologies.
- Optimized the tracking pipeline for performance, implementing Kalman filtering and Hungarian algorithm for data association, ensuring efficient and reliable tracking in real-world scenarios

Sign Language Detection   **LINK**
OpenCV and LSTM-based system recognizing hand gestures in real-time with high accuracy.

- Created a real-time Sign Language Recognition system using OpenCV, Media pipe, and TensorFlow for accurate hand gesture tracking and classification.
- Designed and trained an LSTM-based neural network to recognize sign language gestures, leveraging deep learning, time-series analysis, and computer vision techniques.
- Optimized model performance for real-time applications, integrating custom datasets, data augmentation, and efficient inference pipelines for deployment.

Speech Emotion Recognition   **LINK**
CNN model analyzing audio features to classify emotions from speech with improved accuracy.

- Developed a Speech Emotion Recognition system employing Librosa for feature extraction and TensorFlow for constructing and training neural networks.
- Created a Convolutional Neural Network (CNN) model to accurately classify emotions from audio signals, utilizing Mel-frequency cepstral coefficients (MFCCs) and spectrograms as input features.
- Enhanced model performance through techniques like data augmentation, hyperparameter tuning, and cross validation, achieving improved accuracy in emotion classification tasks.

Academic and Extracurricular Achievements

- **FLIPKART GRID 6.0 (SOFTWARE DEVELOPMENT TRACK)**: Successfully completed Round 1 and received an invitation from Flipkart for the DSA round based on performance.
- **GDSC Leadership Role:** Served as GDSC (Google Developer Student Club) Coordinator at college, organizing technical workshops and fostering a community of student developers (2024-present)
- **Google Summer of Code Selection:** Successfully shortlisted for Google Summer of Code (GSoC) representing college (2024), demonstrating exceptional coding skills and open-source contribution capabilities
- **Technical Workshop Facilitation:** Conducted hands-on technical workshops focusing on emerging technologies, enhancing peer learning and skill development across campus.