Test Case	Description	Initial Result	Modifications & Fixes	Final Result
TC1: Dataset Preprocessing	*Verify if the KOA-NM dataset is correctly loaded, structured, and split into train, validation, and test sets.*	Passed	*Converted .MOV files to .mp4, handled missing/corrupt files*	Passed
TC2: Dataset Split	*Split the dataset in to train and test in ration of 8:2*	Passed	*N/A*	Passed
TC2: Frame Extraction	*Check if video files are correctly converted into frames for analysis.*	Passed	*Adjusted frame extraction logic to maintain uniform FPS*	Passed
TC3: Feature Extraction from Frames	*Verify if extracted frames contain relevant joint movement information.*	Passed	*Enhanced preprocessing with noise reduction and keypoint refinement*	Passed
TC4: Pose Estimation	*Check if OpenPose/Mediapipe can extract gait features from video input.*	Passed	*N/A*	Passed
TC5: Model Training	*Ensure the CNN-LSTM model successfully trains on the KOA dataset and achieves a minimum of 85% accuracy.*	Passed	*Tuned hyperparameters, increased training epochs, and added data augmentation*	Passed
TC7: Model Evaluation	*Evaluate the model's performance with the test dataset and observe the perfromance and verify with the training perfromace*	Passed		Passed
TC6: KOA Classification	*Verify if the trained model correctly classifies gait into KOA severity levels.*	Passed	*N/A*	Passed
TC7: Real-Time Prediction	*Check if the model can process and classify a new gait video within 50 seconds.*	Passed	*N/A*	Passed