

Approach and Methodology:

- **Detection:** YOLOv8+
- **Tracking:** DeepSORT
- **Embedding:** ResNet50 (2048-dim)
- **Matching:** Cosine similarity on normalized embeddings

Techniques Tried:

- **DeepSORT** for intra-video tracking
- **Cosine similarity** for cross-video ID
- **Normalization** for better feature comparison

Challenges:

- Viewpoint variation, occlusion
- Detection misses
- Track fragmentation

Future Work:

- Try OSNet/TransReID
- Add jersey OCR
- Temporal smoothing-
- Better visualization