**Project Weekly report**

**Topic : - Offline Track association problem**

**Group Name: ML Titans**

**Project Definition: 3**

**Group Member’s names:-**

**Kaushik Gohil, Richa Saraiya, Devanshi Rathod , Devasya Rajguru , Jay Golakiya**

* Model Analysis for Object tracking and detection
* DeepSORT: Enhanced SORT with deep learning, using appearance features & Kalman filtering for MOT. Used in pedestrian, vehicle tracking, and surveillance.
* ByteTrack: Retains low-score detections for robust MOT. Used in real-time tracking, autonomous driving, and security.
* Graph-based Tracklet Association: Uses graph optimization for long-term tracking & occlusion handling. Applied in sports analytics & crowd analysis.
* YOLOv8: Real-time object detection, integrates with tracking frameworks. Used in autonomous vehicles, security, and industry.
* Norfair: Lightweight, distance-based tracker for drones, robotics, and simple tracking.
* OpenCV: Traditional tracking algorithms (KCF, CSRT, MOSSE) for gesture, face tracking, and robotics.
* Next week - Method selection and reading papers