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

❖ **Progress Summary**

- The VisDrone dataset is structured into two main folders: Sequence and Annotations. The Sequence folder contains individual video frames extracted from drone footage, capturing moving objects such as pedestrians, cars, and other dynamic elements. These frames provide the raw visual data needed for object tracking. The Annotations folder includes corresponding .txt files that contain labeled information for each frame, including bounding box coordinates, object class, object ID, and movement details. This annotation data helps in identifying and tracking objects across multiple frames. By combining the frame data from the Sequence folder with the metadata from the Annotations folder, object movement patterns can be analyzed effectively. Various tracking methods were applied to assess accuracy, refine object associations, and improve the overall tracking process.

❖ **Challenges Faced:**

- Understanding the relationship between sequence frames and annotations.
- Selecting the most useful details for tracking.
- Managing occlusions, sudden object movements, and varying drone angles.
- Fine-tuning tracking methods for better object association.

◊ **Next week-** Trajectory mapping will be refined by improving object association across frames. Tracking accuracy will be enhanced by optimizing detail extraction from sequence and annotation files. Models will be fine-tuned to handle occlusions, sudden movements, and perspective changes. Tracking stability will be improved to ensure consistency in complex environments.