Course Name: Machine Learning

Weekly Report: 5

Group Name: XYZ

Submitted to faculty:

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WORK DONE THIS WEEK

Performance Evaluation on Diverse Objects

- Tests were conducted on a variety of <u>objects comprising cars bikes buses</u> to obtain performance data for the system.
- The analysis of failed detection and tracking scenarios delivered knowledge for improving future performance.
- The system maintained logged <u>data</u> which allowed us to measure precision and operational speed when processing different types of objects.

Cubic Spline Interpolation

- Trajectory recovery smoothing was enhanced using cubic spline interpolation.
- The interpolation results were checked against established methods for validating improved path unity.
- The system performed its first round of tests using genuine data to measure its performance with noisy parameters.

WORK TO BE DONE NEXT WEEK

1. **Adaptive Merging Strategies**: We will be investigating the graph-based approach and probabilistic approaches, which will pose as the alternatives to KD-Tree.
2. **Dataset Expansion**: We will be exploring the additional datasets like VSAI, from which we can achieve better generalization.
3. **Feature Optimization**: We will be enhancing the feature extraction part, inorder to balance both the accuracy and the computational efficiency.