

CSE541 - Computer Vision

Weekly Report 8

**Improvising Object Tracking Algorithm SORT for Long-Term Trajectory Extraction**

Mentor: Mehul Raval

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Conducted an extensive review of literature on ResNet18 architecture and its applicability in feature extraction for object tracking algorithms. Analyzed existing research studies and benchmarks to understand the performance of ResNet18 in similar applications. Implemented ResNet18 architecture for feature extraction within the SORT algorithm framework. Adapted the feature extraction module to integrate seamlessly with the existing SORT algorithm pipeline. Conducted thorough testing to ensure functionality and compatibility of the enhanced algorithm. Evaluated the performance of the enhanced SORT algorithm with ResNet18 feature extraction on benchmark datasets. Compared the results with baseline SORT algorithm performance and alternative feature extraction methods to assess improvement in long-term trajectory extraction. Analyzed computational efficiency and resource utilization of the enhanced algorithm.