

SUPPLEMENT: Learning Optimal Parameters For Multi-target Tracking

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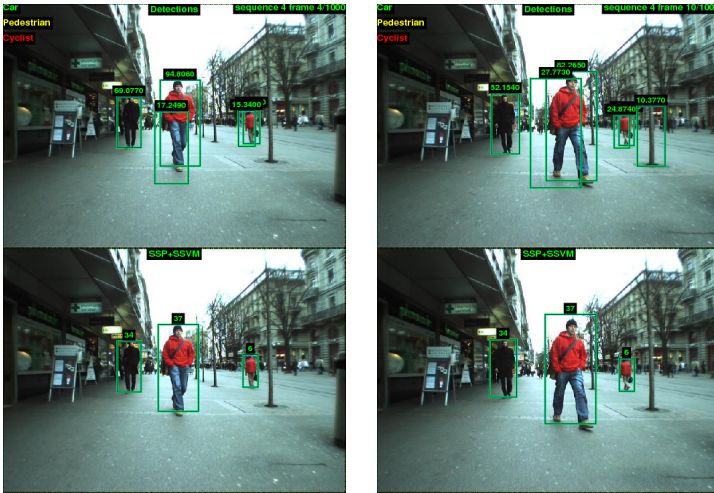


Figure 1: By learning a proper parameter set, even a network-flow model without pairwise potentials can prune away many false tracks by reasoning about detection confidence and transition smoothness.



Figure 2: Additional Qualitative Results on KITTI DPM detection set. With help of intra-class quadratic interactions, the tracker is able to instantiate more correct trajectories.

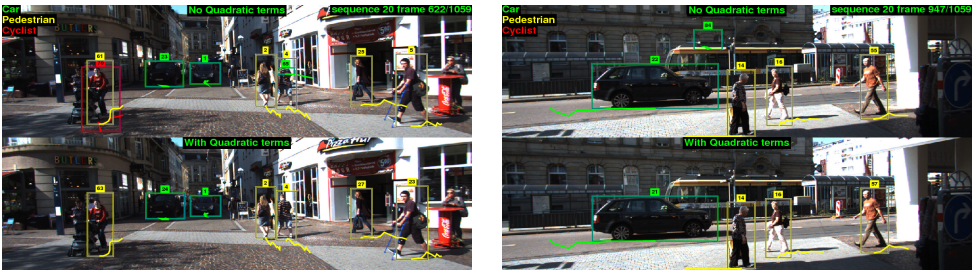


Figure 3: Additional Qualitative Results on KITTI DPM detection set. Traditional model has wrongly labeled "a person pushing a cart" as "cyclist" (top-left), while our quadratic model is able to suppress cyclist trajectory with a high penalty between co-occurrence of pedestrian and cyclist (bottom-left). The quadratic interaction is also helpful in that it could help to suppress spatially infeasible co-occurrence from imperfect detector, such as a car appears on the back of a pedestrian (left), or a car "flying" above a pedestrian (right).