SDC Tracking Competition Report

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01

Pipeline

01 Pipeline

Predict trackers | Match detections with trackers by IOU | Update result | Add new trackers for unpaired detections

Load data → Find corresponding class label → egovehicle frame → city frame → ab3dmot.update
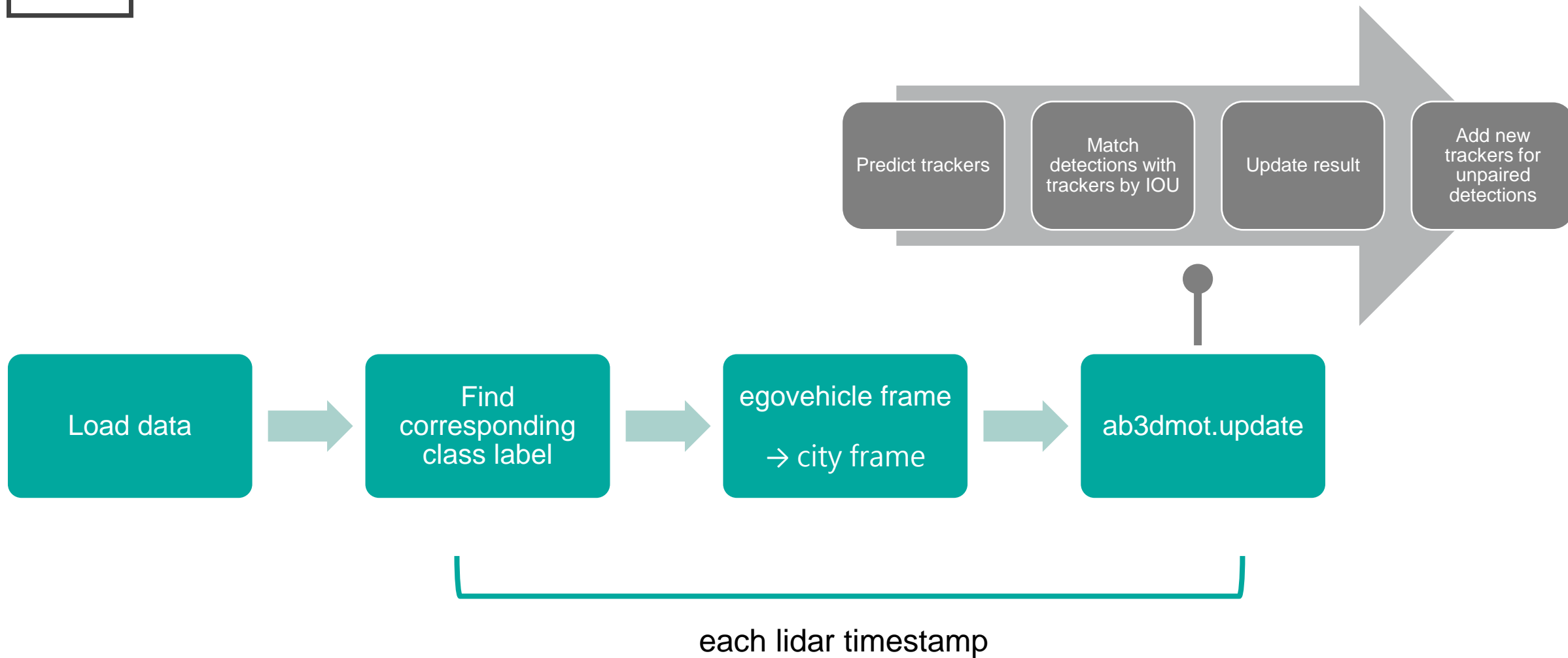
each lidar timestamp

02

Contribution

Contribution

Method：Simple Gaussian Mixture Filter (GMF)

1. Weighted parameter (w_i, [0,1]) - 每個高斯元素都有不同的比重並與classification score成正比

2. Probability of survival (p_s [0,1]) - 在一特定時間內目標存活的概率

3. Estimate threshold (t_e [0,1]) - 認定追蹤目標的閾值

4. Prune threshold (t_p [0,1]) - 將高斯元素從tracker移除的門檻

Contribution: change the way to calculate match-distance from IOU to Mahalanobis distance

03

Problems
& Solutions

03 Problems & Solutions

- Tune the parameters (**survival p_s & estimate threshold**) according to performance considerations.

- Although I don't know the result because of the broken website, we still can see that a little change of this two parameters would cause a much worse performance which shows that these parameters is crucial.

04

Result

04 Visualization Result

- https://drive.google.com/file/d/1VJft-LGnpd80iU_JKcze5VGITRR2Uexx/view?usp=sharing

THANKS