

Weekly Progress Report

Nov 01 - 04th, 2021


Presented by Yannis (Yiming) He 84189287

Noah's Ark | Autonomous Driving Lab
LiDAR Domain Adaptation

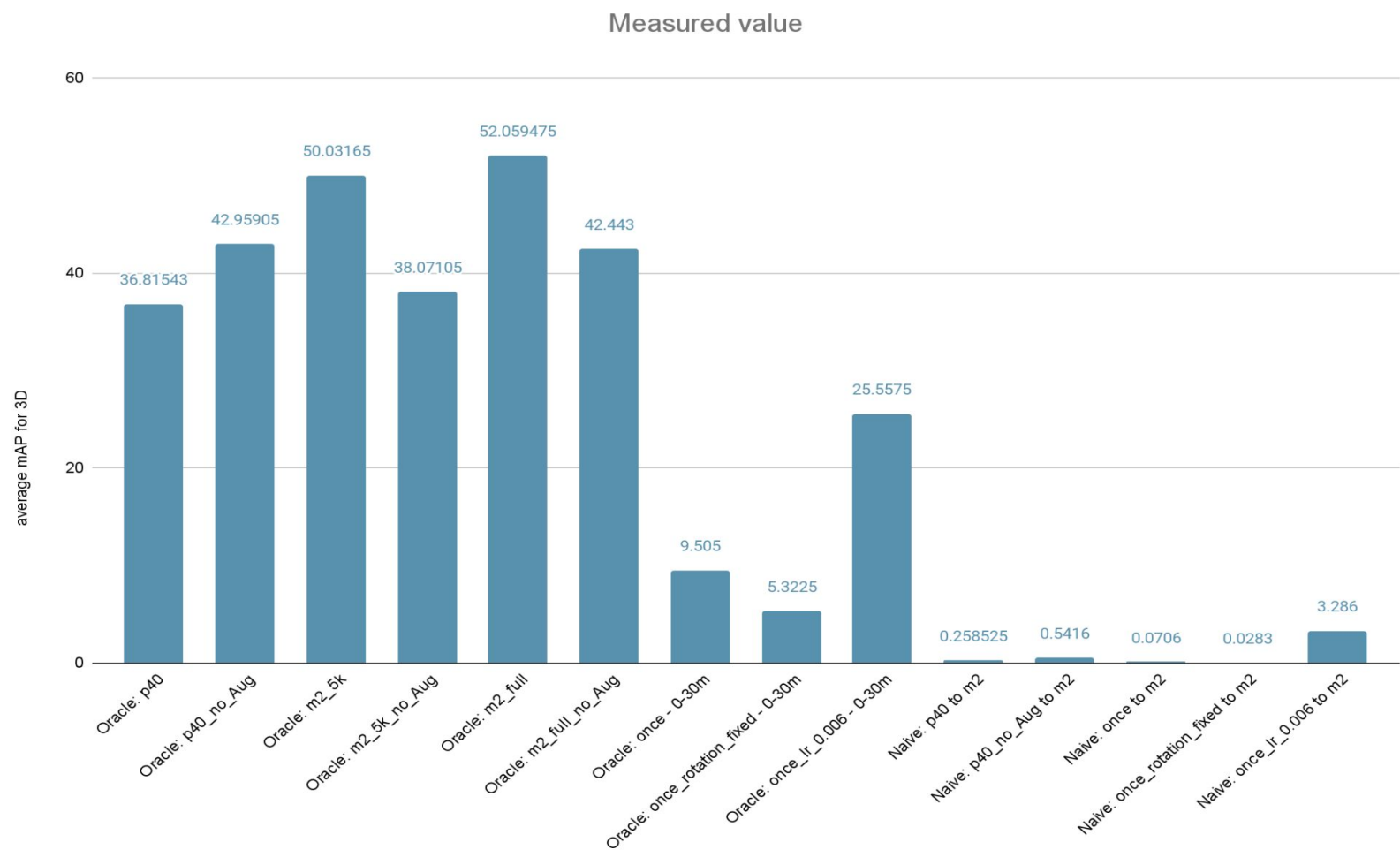
Manager: Bingbing Liu 00435285
Supervisor: Eduardo Corral Soto 00407762



Weekly Summary

- **Done:**
 - Experiment on effect after ONCE_rotation_fixed (Oracle & naive DA on m2)
 - Got worse performance.
 - Investigation on configuration: learning rate is making a great difference
 - With lr: 0.072 \rightarrow 0.006
 - Oracle improved ~ 5 times (5.32 \rightarrow 25.6)
 - Naive DA on m2 improved (0.03 \rightarrow 3.3)
- **In Progress:**
 -  - Region of Interest (ROI):
 - Evaluate P40 with ROI_x_flip_prob = 0.5 on M2 dataset
 - Visualization every frame BEV
 - to understand the false positive/negative
- **Recent Goals:**
 - Development: Plot mAP for all checkpoint for each class
- **TODO:**
 - Understanding: once_metric vs kitti metric
 - Prepare a decision diagram & flowchart for testing pipeline
 - Visualize frames having good and bad performances
 - Investigate correlation between performance & bbox (in progress)
 - Run entire pipeline with each frame individually (TODO)
 - Rank frames by AP (TODO)
 - Visualize frame with high & low AP (TODO)

Work Logs



Work Logs

- Nov 01 (Monday)
 - Investigation on training:
 - P40 new vs old code base:
 - Unstable training
 - Bug:
 - “Cannot perform reduction function max on tensor with no elements because the operation does not have an identity at ...”
 - Worse performance
 - ONCE before vs after rotation fixed:
 - Worse performance, not on the same scale with what Xingxin got
 - ROI:
 - dimension unmatched
 - Development: Plot mAP for all checkpoint for each class

Work Logs

➡ Nov 02 (Tuesday)

- Investigation on training:
 - P40 new vs old code base:
 - Unstable training
 - Bug:
 - “Cannot perform reduction function max on tensor with no elements because the operation does not have an identity at ...”
 - Worse performance
- Experiment on effect after ONCE_rotation_fixed (Oracle & naive DA on m2)
 - Got worse performance.
 - Investigation on configuration: learning rate is making a great difference
 - With lr: 0.072 \rightarrow 0.006
 - Oracle improved ~ 5 times (5.32 \rightarrow 25.6)
 - Naive DA on m2 improved (0.03 \rightarrow 3.3)
 - ROI:
 - dimension unmatched
- Development: Plot mAP for all checkpoint for each class

End of November 04th, Weekly Report