KPRNet: Improving projection-based LiDAR semantic segmentation

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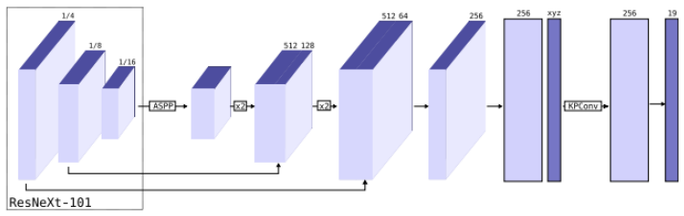
Method:



- Was state of the art at the time
- ResNext-101
- KPConv
- Learnable from end-to-end

Results:

	Paper	Ours
Mean IoU	63,1	61,2

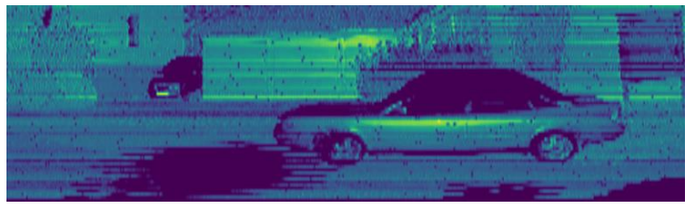
- Similar results

Challenges:

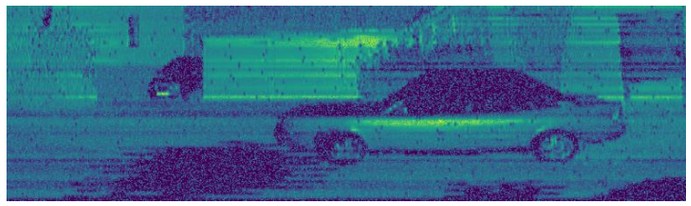
- No training possible
- Insufficient code documentation

Data augmentation:

Reflectivity:

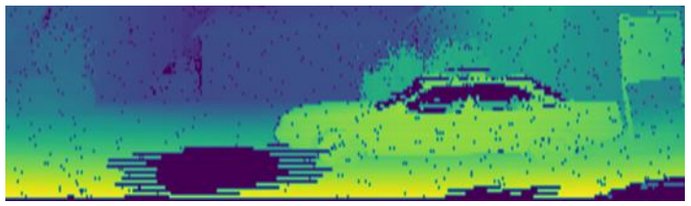


Original

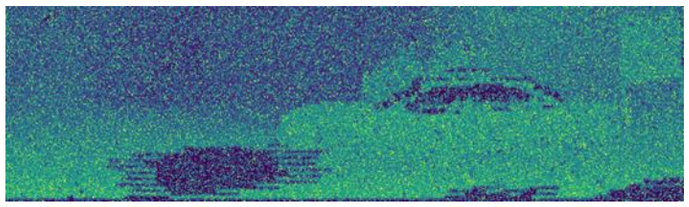


Obscure factor: 20%

Inverse depth:



Original



Obscure factor: 20%

Results:

- 10% Mean IoU: 10,2
- 20% Mean IoU: 7,7
- More impact on smaller objects

KITTI360:

Sampling method:

Resulting sampled LiDAR sweep

Limitations:

- Computational expensive
- Sub optimal