

- incomplete masks (i.e. false-negative errors).
- improved the segmentation results.





Dense Contrastive Loss for Instance Segmentation

Hang Chen¹, Chufeng Tang¹, Xiaolin Hu^{12†} ¹Tsinghua University, ²Chinese Institute for Brain Research (CIBR)

Methodology

$P_{bFP}\downarrow$	$\Delta AP_{FN}\downarrow$
4.7	21.2
5.3	18.8



Results

DCL achieved consistent improvement on baseline models and various various datasets without introduce any test-time overhead.

> Cityscapes Dataset:

	COCO	AP _{val}	AP _{test}
PointRend [23]		35.8	-
Mask R-CNN [14]	\checkmark	36.4	32.0
BShapeNet+ [21]	\checkmark	-	32.9
UPSNet [36]	\checkmark	37.8	33.0
CondInst [28]	\checkmark	37.5	33.2
Mask R-CNN*		33.1	28.4
w/DCL		37.1	31.1
Mask R-CNN*		37.3	32.0
w/DCL	V	38.6	33.5
RefineMask [38]		37.6	32.0
w/DCL		39.0	33.6

> COCO Dataset:

		DCL	AP _{val}	AP _{dev}
Mask R-CNN	DecNet CO		35.2	35.4
	Resnet-50	\checkmark	35.7	36.0
	Swin-T		39.3	39.9
		\checkmark	39.9	40.2
SparseInst			31.6	32.0
	Kesnet-50	\checkmark	32.1	32.4