Supplementary File for Amodal Segmentation Network

1. Evaluation Result

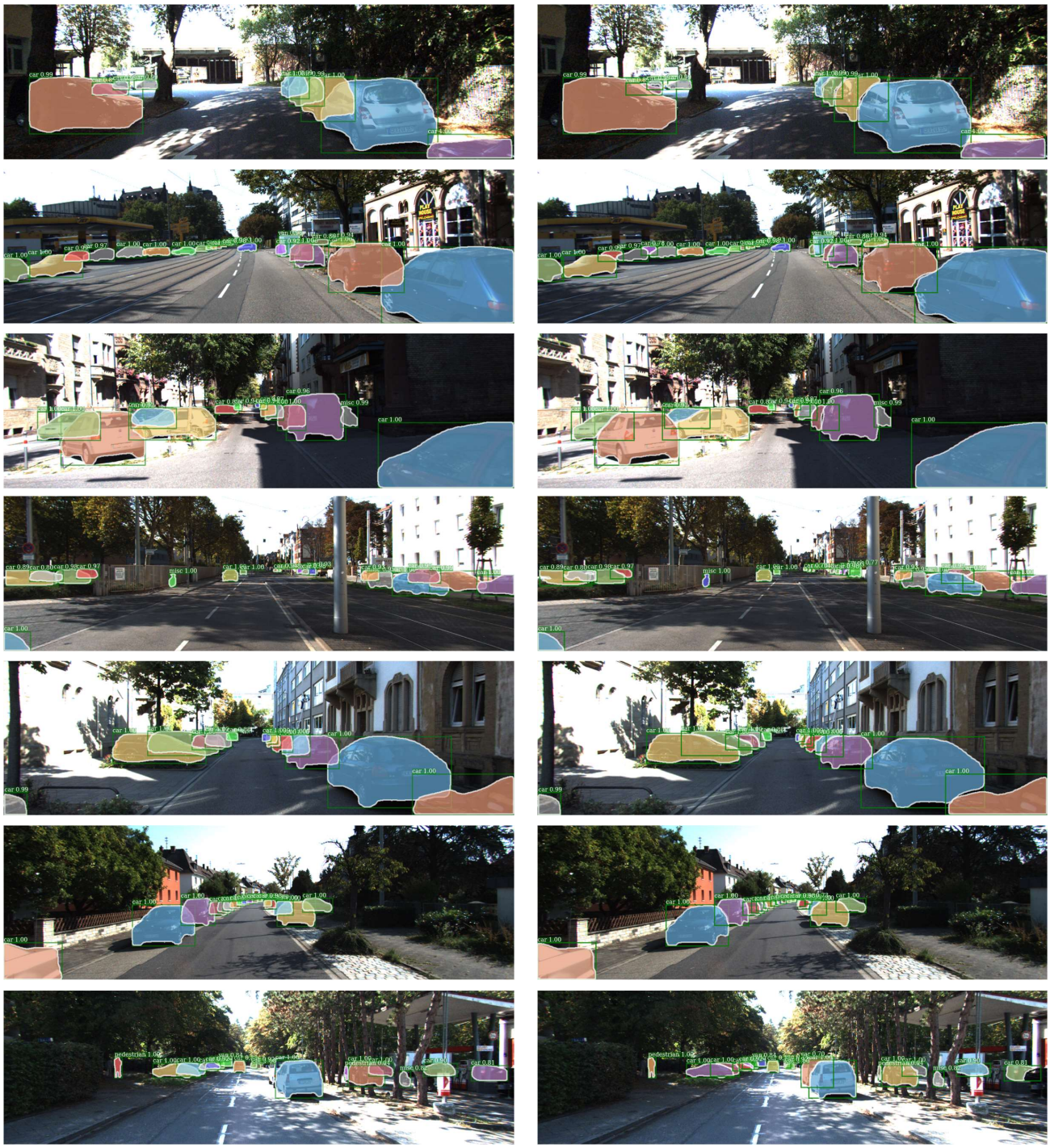
The per-class results are shown in Table 1.

	Mask R-CNN			Mask R-CNN + ASN		
type	Det	Amodal	Inmodal	Det	Amodal	Inmodal
all	31.3	29.3	26.6	32.7	31.3	28.7
cyclist	40.1	35.8	34.8	42.0	38.7	37.6
pedestrian	34.6	31.1	29.2	36.0	32.9	30.9
car	49.7	49.6	43.5	51.3	51.5	45.9
tram	10.9	13.2	11.1	12.8	15.6	14.2
truck	8.4	8.9	8.7	10.9	11.4	11.3
van	26.3	26.7	21.6	25.8	26.2	22.7
misc	48.9	40.1	37.6	49.8	41.5	38.5

Table 1. Per-class results of Mask R-CNN w/ and w/o ASN.

2. Visualization of ASN

As shown in Fig. 1, 2, 3 and 4, our model can generate amodal and inmodal masks simultaneously. It also manifests that the instance outlines can be predicted under partial occlusion. The common error mode for amodal mask is the inaccuracy on small separate components such as wheels of vehicles. Predicting them accurately is hard even for human. The network prefers to generate common large-scale structure for better convergence.

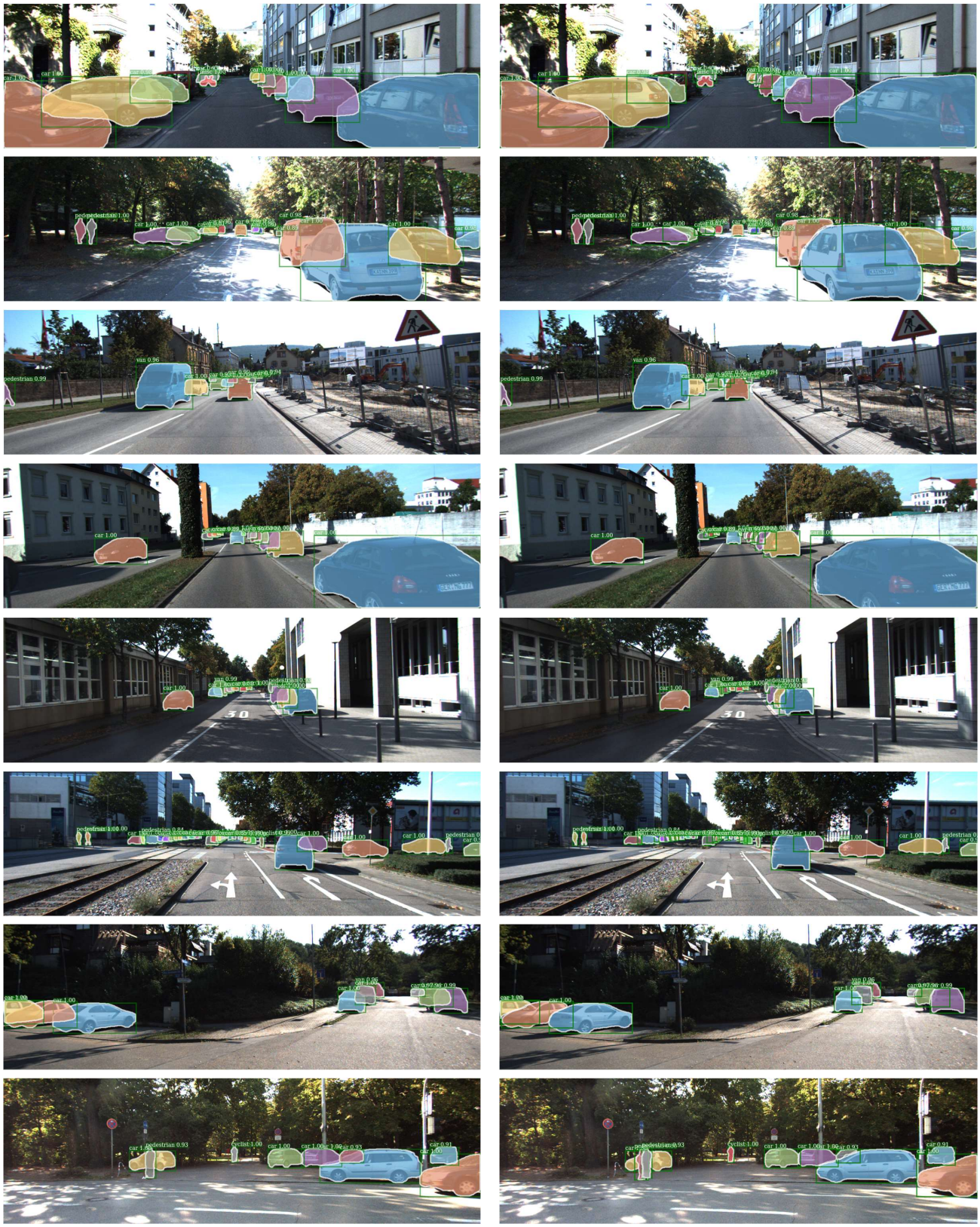


(a) (b)

Figure 1. The Visualization of amodal segmentation network on KINS. (a) Amodal mask. (b) Inmodal mask.

(a) (b)

Figure 2. The Visualization of amodal segmentation network on KINS. (a) Amodal mask. (b) Inmodal mask.



(a) (b)

Figure 3. The Visualization of amodal segmentation network on KINS. (a) Amodal mask. (b) Inmodal mask.

(a) (b)

Figure 4. The Visualization of amodal segmentation network on KINS. (a) Amodal mask. (b) Inmodal mask.