

1 Examples of Segmentation Results

Figure 1 and Figure 2 show some segmentation results on Cityscapes and CamVid.

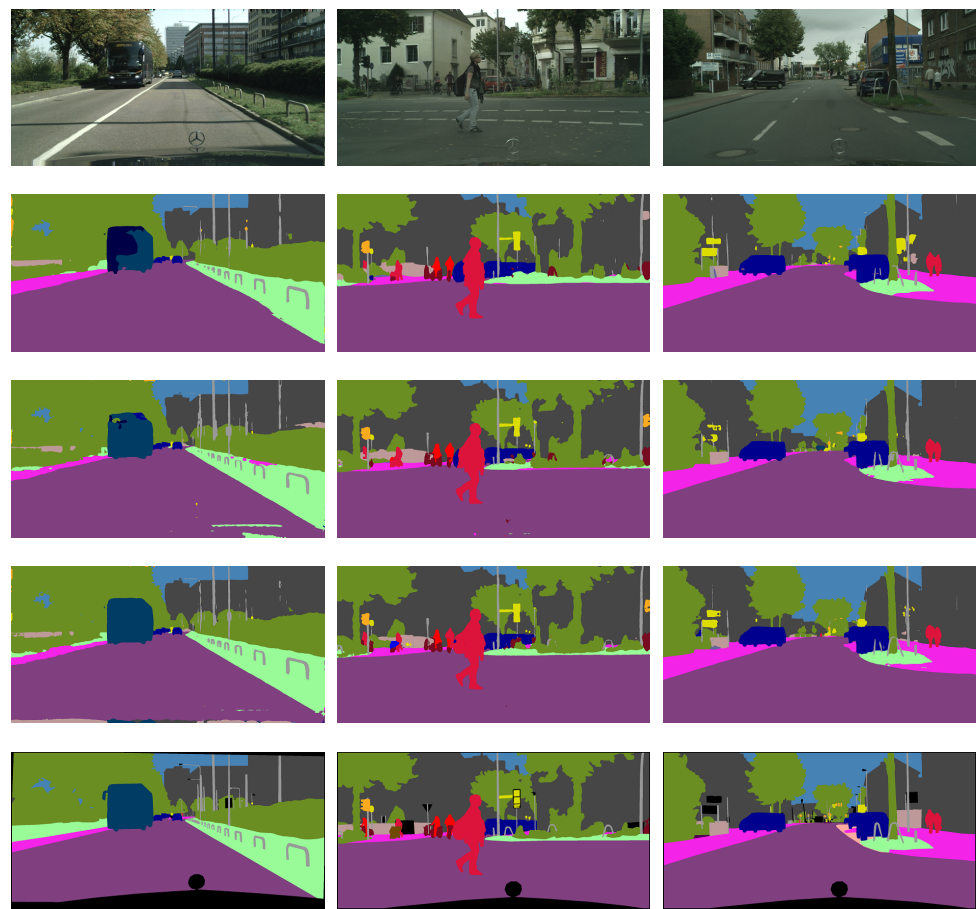


Figure 1: Results of the proposed AttNAS on Cityscapes validation set. The first row is input images. Row 2 is the outputs of FasterSeg. Row 3 and Row 4 display the outputs of AttNAS-S and AttNAS-L. Row 5 is the ground truth.

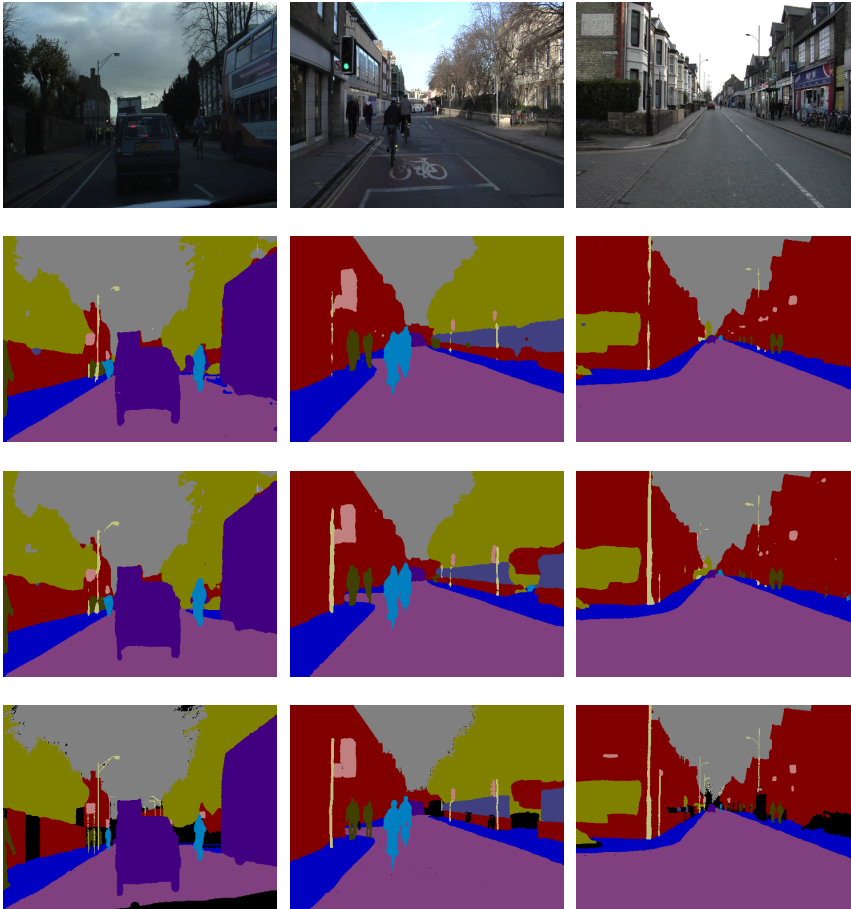


Figure 2: Results of the proposed AttnNAS on CamVid. The first row is input images. Row 2 and Row 3 display the outputs of AttnNAS-S and AttnNAS-L. Row 4 is the ground truth.

2 Searching on CamVid

We verify the feasibility of searching on CamVid and transferring to Cityscapes. We use a similar process as searching on Cityscapes and transferring to CamVid, except that the performance on CamVid is obtained by training from scratch for 1000 epochs with only CamVid training set (701 images) without pretrained model on Cityscapes.

(a) CamVid				(b) Cityscapes val			
Method	mIoU(%)	FLOPs	#Params	Method	mIoU(%)	FLOPs	#Params
baseline(mv2+aspp)	67.4	13.6G	4.5M	baseline(mv2+aspp)	73.4	41.4G	4.5M
AttnNAS-c	70.0	9.2G	2.2M	AttnNAS-c	73.6	28.1G	2.2M

Table 1: Results on CamVid and Cityscapes by Searching with CamVid

We first search with CamVid dataset and verify the searched architecture on CamVid. As

shown Table 1, our searched model AttNAS-c achieves higher performance than the baseline mobilenetv2+aspp model (mIoU: 70.0% vs. 67.4%) with less FLOPs and parameters. As CamVid only has a small number of samples (736 images for training, 101 for validation and 233 for testing) and our results are obtained by training from scratch on CamVid, the results are a little lower than the results in the paper which are obtained by transferring from the pretrained model on Cityscapes.

We then test the above searched architecture on Cityscapes. The searched model AttNAS-c still gets better performance than the baseline mobilenetv2+aspp model with smaller FLOPs and Parameters (mIoU: 73.6% vs. 73.4%). Thus, the proposed method is robust to searching datasets.