### Appendix

#### 7.1. Perturbation Function Details

Here, we describe the parameters used for each perturbation function. For the baseline model with data augmentation as the perturbation function, we use the set of augmentations in Figure 3. These are based on the augmentations from SimCLR [9] and implemented using the albumentations [5] library. For style consistency model, we obtain perturbed images by applying the Avatar-Net [45] style transfer model to the image.<sup>1</sup> We use the default Avatar-Net strength parameter of 0.1. For the Fourier consistency model, we employ the same Fourier swapping function as [56]. We use a lowfrequency window size parameter of  $\beta = 0.01$ . Finally, for the CutMix consistency model, we employ the cutmix function from [58].<sup>2</sup>

### 7.2. Additional Combinations of Perturbation Functions

In Table 6, we show the result of additional combinations of perturbation functions.

#### Algorithm 2: Augmentations

```
Compose([
  RandomResizedCrop(scale=(0.2, 1)),
  Compose([
   RandomBrightnessContrast(p=1),
   HueSaturationValue(p=1)
 ], p=0.8),
  ToGray(p=0.2),
  GaussianBlur(blur_limit=5, p=0.5),
])
```

Figure 3. PyTorch-style pseudocode for our chosen data augmentation function.

<sup>&</sup>lt;sup>1</sup>https://github.com/tyui592/Avatar-Net\_Pytorch <sup>2</sup>https://github.com/clovaai/CutMix-PyTorch



Figure 4. Examples of our data augmentation function applied to target-domain images. Note that the "augmentation" images are a different size and aspect ratio because random cropping is part of the augmentation procedure. Also note that although the "style" and "Fourier" images appear unnatural on a global scale, they appear similar to the source domain on a local/low-frequency scale.



Figure 5. Qualitative examples of our consistency training method and prior methods on SYNTHIA-to-Cityscapes.

# SYNTHIA-to-Cityscapes

	mIoU-16	mIoU-13
LTIR [28]	-	49.3
SOTA (PLCA [27])	46.8	54.0
Ours: Fourier only	44.0	51.1
Ours: Fourier + Aug	45.6	54.0
Ours: Fourier + Cutmix	46.1	54.5
Ours: Fourier + Cutmix + Aug	43.7	52.1

	mIoU
SOTA (LTIR [28])	50.2
PLCA [27]	_47.7
Ours: Aug only	48.3
Ours: Aug + Fourier	49.3
Ours: Aug + MaxSquareLoss	50.4

# **GTA-to-Cityscapes**

Table 6. Performance of additional combinations of perturbation functions compared to SOTA.