Reading note

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目录

1 LaTeX using tips **1**
1.1 Document Organization 1

2 Dataset **2**
2.1 Day 2
2.2 Night 2
2.2.1 NHC [1] 2
2.2.2 NightHaze & YellowHaze [2] 3

1 LaTeX using tips

Some tips when writing this article.

1.1 Document Organization

在文档类 article/ctexart 中，定义了五个控制序列来调整行文组织结构。他们分别是

- section
- subsection
- subsubsection
- paragraph

Dataset	Haze Density	Number	Synthetic	Tasks
NHC-L	Light	2750		ND+CR
NHC-M	Medium	2750		ND
NHC-D	Dense	2750		ND
NHM	All	350		ND
NHR	All	8970		ND
NHRW	All	150	x	ND
DCRW	x	1500	x	CR

- subparagraph

在report/ctexrep中，还有chapter；在文档类book/ctexbook中，还定义了part。

2 Dataset

2.1 Day

2.2 Night

2.2.1 NHC [1]

550 clear images were selected from Cityscapes to synthesize nighttime hazy images using 3R. We synthesized 5 images for each of them by changing the light positions and colors, resulting in a total of 2,750 images, called “Nighttime Hazy Cityscapes” (NHC). We also altered the haze density by setting βt to 0.005, 0.01, and 0.02, resulting in different datasets denoted NHC-L, NHC-M, and NHC-D, where “L”, “M”, and “D” represent light haze, medium haze, and dense haze. Further, we also modified the method by changing the constant yellow light color with our randomly sampled real-world light colors described in Section 3.1 and synthesized images on the Middlebury (70 images) and RESIDE (8,970 images) datasets . Similar to NHC, we augmented the Middlebury dataset by 5 times, resulting in a total of 350 images. They are denoted NHM and NHR, respectively. The statistics of these datasets are summarized in Table 1 in Section 6

- NHC-M medium haze (2,750 images)
- NHC-L light haze
- NHC-D dense haze
- NHM Middlebury (70 images)
- NHR RESIDE (8,970 images)

2.2.2 NightHaze & YellowHaze [2]

We also provide the datasets adopted in the work:

- Haze-Free
- NightHaze-1
- NightHaze-2
- Haze-Free-Yellow
- YellowHaze-1
- YellowHaze-2

The initial size of images is not 128 x 128 but they are downsampled to smaller resolution before training. Dehazing effects may vary when a different dataset is trained.

参考文献

[1] Zhang, Jing, et al. "Nighttime dehazing with a synthetic benchmark." Proceedings of the 28th ACM international conference on multimedia. 2020.

[2] Liao, Yinghong, et al. "Hdp-net: Haze density prediction network for nighttime dehazing." Pacific Rim Conference on Multimedia. Springer, Cham, 2018.