

TrilevelNAS-B for PSNR-oriented

Pretrained search: ckpt/search/search4_psnr_sparsestmax_order_1e-5

Pretrained model: ckpt/finetune/search4_psnr_sparsestmax_order_1e-5_div2k

Data: '/srv/beegfs02/scratch/generative_modeling/data/wuyan/AutoSR/data'

❖ A quick start to finetune on pretrained model:

- setting in config_train_from_search.py:

C.pretrain = 'ckpt/finetune/search4_psnr_sparsestmax_order_1e-5_div2k/weights_0.pt'

C.load_path = './ckpt/search/search4_psnr_sparsestmax_order_1e-5'

• Search

- Important setting in config_search.py:

C.num_cell = 5 # num of RiR cells

C.op_per_cell = 5 # num of cells within RiR cell

C.num_up = 2 # num of convolution/upsampling layers

C.num_cell_path_search = 4 # num of RiR cells with searchable path

C.pretrain = True # pretrain/search

C.exp_name = 'test' # save path

C.dataset_path = '' # Dataset path

C.generator_A2B = 'ESRGAN/RRDB_PSNR_x4.pth' # teacher model path

2 steps:

1. pretrain step:

python train_search.py

- setting in config_search.py:

C.pretrain = True

C.exp_name = 'test'

python train_search.py

2. search step:

python train_search.py

- setting in config_search.py:

C.pretrain = './ckpt/pretrain/test'

C.exp_name = 'test'

• Train

- Train from scratch:

python train.py

- setting in config_train.py:

C.pretrain = False

C.load_path='./ckpt/search/test'

- Train from search:

2 steps:

1. **python get_inherit_weights.py**

- setting in config_inherit_weight.py:

C.load_path = './ckpt/search/test'

2. **python train_from_search.py**

- setting in config_train_search.py:

C.pretrain = False

C.load_path='./ckpt/search/test'

- Evaluation

`python eval.py`

- setting in config_eval.py:
C.load_path = './ckpt/search/test'
C.ckpt = './ckpt/finetune_pretrain/test'