

```

from google.colab import drive
import shutil
drive.mount('/content/drive')

Mounted at /content/drive

!git clone https://github.com/XPixelGroup/HAT.git
%cd HAT
!pip install -r requirements.txt
!python setup.py develop

Cloning into 'HAT'...
remote: Enumerating objects: 316, done.
remote: Counting objects: 100% (315/315), done.
remote: Compressing objects: 100% (167/167), done.
remote: Total 316 (delta 172), reused 256 (delta 128), pack-reused 1
Receiving objects: 100% (316/316), 471.50 KiB | 7.14 MiB/s, done.
Resolving deltas: 100% (172/172), done.
/content/HAT
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Collecting einops
  Downloading einops-0.6.1-py3-none-any.whl (42 kB)
    42.2/42.2 kB 1.8 MB/s eta 0:00:00
Requirement already satisfied: torch>=1.7 in /usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 2)) (2.0.0+cu118)
Collecting basicsr==1.3.4.9
  Downloading basicsr-1.3.4.9.tar.gz (161 kB)
    161.2/161.2 kB 6.5 MB/s eta 0:00:00
  Preparing metadata (setup.py) ... done
Collecting addict
  Downloading addict-2.4.0-py3-none-any.whl (3.8 kB)
Requirement already satisfied: future in /usr/local/lib/python3.10/dist-packages (from basicsr==1.3.4.9->-r requirements.txt (line 3))
Collecting lmbd
  Downloading lmbd-1.4.1-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (299 kB)
    299.2/299.2 kB 15.7 MB/s eta 0:00:00
Requirement already satisfied: numpy in /usr/local/lib/python3.10/dist-packages (from basicsr==1.3.4.9->-r requirements.txt (line 3))
Requirement already satisfied: opencv-python in /usr/local/lib/python3.10/dist-packages (from basicsr==1.3.4.9->-r requirements.txt)
Requirement already satisfied: Pillow in /usr/local/lib/python3.10/dist-packages (from basicsr==1.3.4.9->-r requirements.txt (line 3))
Requirement already satisfied: pyyaml in /usr/local/lib/python3.10/dist-packages (from basicsr==1.3.4.9->-r requirements.txt (line 3))
Requirement already satisfied: requests in /usr/local/lib/python3.10/dist-packages (from basicsr==1.3.4.9->-r requirements.txt (line 3))
Requirement already satisfied: scikit-image in /usr/local/lib/python3.10/dist-packages (from basicsr==1.3.4.9->-r requirements.txt (line 3))
Requirement already satisfied: scipy in /usr/local/lib/python3.10/dist-packages (from basicsr==1.3.4.9->-r requirements.txt (line 3))
Collecting tb-nightly
  Downloading tb_nightly-2.13.0a20230430-py3-none-any.whl (5.6 MB)
    5.6/5.6 MB 58.3 MB/s eta 0:00:00
Requirement already satisfied: torchvision in /usr/local/lib/python3.10/dist-packages (from basicsr==1.3.4.9->-r requirements.txt (line 3))
Requirement already satisfied: tqdm in /usr/local/lib/python3.10/dist-packages (from basicsr==1.3.4.9->-r requirements.txt (line 3))
Collecting yapf
  Downloading yapf-0.33.0-py2.py3-none-any.whl (200 kB)
    200.9/200.9 kB 23.2 MB/s eta 0:00:00
Requirement already satisfied: filelock in /usr/local/lib/python3.10/dist-packages (from torch>=1.7->-r requirements.txt (line 2)) (3.11.0)
Requirement already satisfied: sympy in /usr/local/lib/python3.10/dist-packages (from torch>=1.7->-r requirements.txt (line 2)) (1.11.1)
Requirement already satisfied: typing-extensions in /usr/local/lib/python3.10/dist-packages (from torch>=1.7->-r requirements.txt (line 2)) (4.5.0)
Requirement already satisfied: Jinja2 in /usr/local/lib/python3.10/dist-packages (from torch>=1.7->-r requirements.txt (line 2)) (3.1.2)
Requirement already satisfied: networkx in /usr/local/lib/python3.10/dist-packages (from torch>=1.7->-r requirements.txt (line 2)) (3.1)
Requirement already satisfied: triton==2.0.0 in /usr/local/lib/python3.10/dist-packages (from torch>=1.7->-r requirements.txt (line 2))
Requirement already satisfied: lit in /usr/local/lib/python3.10/dist-packages (from triton==2.0.0->torch>=1.7->-r requirements.txt (line 2))
Requirement already satisfied: cmake in /usr/local/lib/python3.10/dist-packages (from triton==2.0.0->torch>=1.7->-r requirements.txt)
Requirement already satisfied: MarkupSafe>=2.0 in /usr/local/lib/python3.10/dist-packages (from Jinja2->torch>=1.7->-r requirements.txt)
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages (from requests->basicsr==1.3.4.9->-r requirements.txt)
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages (from requests->basicsr==1.3.4.9->-r requirements.txt)
Requirement already satisfied: charset-normalizer~>2.0.0 in /usr/local/lib/python3.10/dist-packages (from requests->basicsr==1.3.4.9->-r requirements.txt)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in /usr/local/lib/python3.10/dist-packages (from requests->basicsr==1.3.4.9->-r requirements.txt)
Requirement already satisfied: PyWavelets>=1.1.1 in /usr/local/lib/python3.10/dist-packages (from scikit-image->basicsr==1.3.4.9->-r requirements.txt)
Requirement already satisfied: tifffile>=2019.7.26 in /usr/local/lib/python3.10/dist-packages (from scikit-image->basicsr==1.3.4.9->-r requirements.txt)
Requirement already satisfied: imageio>=2.4.1 in /usr/local/lib/python3.10/dist-packages (from scikit-image->basicsr==1.3.4.9->-r requirements.txt)
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.10/dist-packages (from scikit-image->basicsr==1.3.4.9->-r requirements.txt)
Requirement already satisfied: mpmath>=0.19 in /usr/local/lib/python3.10/dist-packages (from sympy->torch>=1.7->-r requirements.txt)
Requirement already satisfied: wheel>=0.26 in /usr/local/lib/python3.10/dist-packages (from tb-nightly->basicsr==1.3.4.9->-r requirements.txt)

```

```
shutil.copy('/content/drive/MyDrive/Research/SR/HAT_SRx4_ImageNet-pretrain.pth', '/content/HAT/experiments/pretrained_models')
```

```
'/content/HAT/experiments/pretrained_models/HAT_SRx4_ImageNet-pretrain.pth'
```

```
shutil.copy('/content/drive/MyDrive/Research/SR/HAT-L_SRx2_ImageNet-pretrain.pth', '/content/HAT/experiments/pretrained_models')
```

```
'/content/HAT/experiments/pretrained_models/HAT-L_SRx2_ImageNet-pretrain.pth'
```

```
%mkdir input_dir
```

```
import os
import glob
from google.colab import files
import shutil

!rm -r /content/HAT/input_dir
des = '/content/HAT/input_dir'
src = '/content/drive/MyDrive/Research/SR/Digital_Images'
if os.path.isdir(des):
    shutil.rmtree(des)
#os.mkdir(des)
shutil.copytree(src, des)

'/content/HAT/input_dir'

!python hat/test.py -opt options/test/HAT_SRx4_ImageNet-LR.yml
shutil.move('/content/HAT/results/HAT_SRx4_ImageNet-LR/visualization/custom', '/content/drive/MyDrive/Research/SR/HAT4x_cort')
```



