dynamic-master

# python env

C:\Users\sbjwak>pip list

Package Version

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anyio 4.0.0

argon2-cffi 23.1.0

argon2-cffi-bindings 21.2.0

arrow 1.3.0

asttokens 2.4.0

async-lru 2.0.4

attrs 23.1.0

Babel 2.13.0

backcall 0.2.0

beautifulsoup4 4.12.2

bleach 6.1.0

certifi 2023.7.22

cffi 1.16.0

charset-normalizer 3.3.0

click 8.1.7

colorama 0.4.6

comm 0.1.4

contourpy 1.1.1

cycler 0.12.1

debugpy 1.8.0

decorator 5.1.1

defusedxml 0.7.1

echonet 1.0.0

executing 2.0.0

fastjsonschema 2.18.1

filelock 3.9.0

fonttools 4.43.1

fqdn 1.5.1

fsspec 2023.4.0

idna 3.4

imageio 2.31.5

ipykernel 6.25.2

ipython 8.16.1

isoduration 20.11.0

jedi 0.19.1

Jinja2 3.1.2

joblib 1.3.2

json5 0.9.14

jsonpointer 2.4

jsonschema 4.19.1

jsonschema-specifications 2023.7.1

jupyter\_client 8.4.0

jupyter\_core 5.4.0

jupyter-events 0.7.0

jupyter-lsp 2.2.0

jupyter\_server 2.7.3

jupyter\_server\_terminals 0.4.4

jupyterlab 4.0.7

jupyterlab-execute-time 3.0.1

jupyterlab-pygments 0.2.2

jupyterlab\_server 2.25.0

kiwisolver 1.4.5

lazy\_loader 0.3

MarkupSafe 2.1.3

matplotlib 3.8.0

matplotlib-inline 0.1.6

mistune 3.0.2

mpmath 1.3.0

nbclient 0.8.0

nbconvert 7.9.2

nbformat 5.9.2

nest-asyncio 1.5.8

networkx 3.0

notebook\_shim 0.2.3

numpy 1.26.0

opencv-python 4.8.1.78

overrides 7.4.0

packaging 23.2

pandas 2.1.1

pandocfilters 1.5.0

parso 0.8.3

pickleshare 0.7.5

Pillow 10.0.1

pip 23.3

platformdirs 3.11.0

prometheus-client 0.17.1

prompt-toolkit 3.0.39

psutil 5.9.5

pure-eval 0.2.2

pycparser 2.21

Pygments 2.16.1

pyparsing 3.1.1

python-dateutil 2.8.2

python-json-logger 2.0.7

pytz 2023.3.post1

pywin32 306

pywinpty 2.0.12

PyYAML 6.0.1

pyzmq 25.1.1

referencing 0.30.2

requests 2.31.0

rfc3339-validator 0.1.4

rfc3986-validator 0.1.1

rpds-py 0.10.6

scikit-image 0.22.0

scikit-learn 1.3.1

scipy 1.11.3

seaborn 0.13.0

Send2Trash 1.8.2

setuptools 65.5.0

six 1.16.0

sniffio 1.3.0

soupsieve 2.5

stack-data 0.6.3

sympy 1.12

terminado 0.17.1

threadpoolctl 3.2.0

tifffile 2023.9.26

tinycss2 1.2.1

torch 2.1.0+cu121

torchaudio 2.1.0+cu121

torchdata 0.7.0

torchtext 0.16.0+cpu

torchvision 0.16.0+cu121

tornado 6.3.3

tqdm 4.64.1

traitlets 5.11.2

types-python-dateutil 2.8.19.14

typing\_extensions 4.4.0

tzdata 2023.3

uri-template 1.3.0

urllib3 2.0.6

wcwidth 0.2.8

webcolors 1.13

webencodings 0.5.1

websocket-client 1.6.4

# git

git clone https://github.com/echonet/dynamic.git

cd dynamic

# sklearn

The 'sklearn' PyPI package is deprecated, use 'scikit-learn'

So update setup.py change 'sklearn' to 'scikit-learn'

# code-update

File echonet\datasets\echo.py update np.int to np.int64

File echonet\utils\segmentation.py update line 120 model to:

model = torchvision.models.segmentation.\_\_dict\_\_[model\_name](weights=torchvision.models.segmentation.DeepLabV3\_ResNet101\_Weights.DEFAULT, aux\_loss=True)

# Install

options：

update pip:

python.exe -m pip install pip -U

update source:

pip config set global.index-url <https://pypi.tuna.tsinghua.edu.cn/simple>

Take care, there is a dot between --user, which means current folder.

D:\Pytorch\DL\dynamic-master> pip install . --user

Looking in indexes: https://pypi.tuna.tsinghua.edu.cn/simple

Processing d:\pytorch\dl\dynamic-master

Preparing metadata (setup.py) ... done

Requirement already satisfied: click in c:\python310\lib\site-packages (from echonet==1.0.0) (8.1.6)

Requirement already satisfied: numpy in c:\python310\lib\site-packages (from echonet==1.0.0) (1.25.1)

Requirement already satisfied: pandas in c:\python310\lib\site-packages (from echonet==1.0.0) (2.0.3)

Requirement already satisfied: torch in c:\python310\lib\site-packages (from echonet==1.0.0) (2.0.1+cu118)

Requirement already satisfied: torchvision in c:\python310\lib\site-packages (from echonet==1.0.0) (0.15.2+cu118)

Collecting opencv-python (from echonet==1.0.0)

Using cached https://pypi.tuna.tsinghua.edu.cn/packages/38/d2/3e8c13ffc37ca5ebc6f382b242b44acb43eb489042e1728407ac3904e72f/opencv\_python-4.8.1.78-cp37-abi3-win\_amd64.whl (38.1 MB)

Collecting scikit-image (from echonet==1.0.0)

Using cached https://pypi.tuna.tsinghua.edu.cn/packages/86/f0/18895318109f9b508f2310f136922e455a453550826a8240b412063c2528/scikit\_image-0.22.0-cp310-cp310-win\_amd64.whl (24.5 MB)

Requirement already satisfied: tqdm in c:\python310\lib\site-packages (from echonet==1.0.0) (4.65.0)

Requirement already satisfied: scikit-learn in c:\python310\lib\site-packages (from echonet==1.0.0) (1.3.0)

Requirement already satisfied: colorama in c:\python310\lib\site-packages (from click->echonet==1.0.0) (0.4.6)

Requirement already satisfied: python-dateutil>=2.8.2 in c:\python310\lib\site-packages (from pandas->echonet==1.0.0) (2.8.2)

Requirement already satisfied: pytz>=2020.1 in c:\python310\lib\site-packages (from pandas->echonet==1.0.0) (2023.3)

Requirement already satisfied: tzdata>=2022.1 in c:\python310\lib\site-packages (from pandas->echonet==1.0.0) (2023.3)

Requirement already satisfied: scipy>=1.8 in c:\python310\lib\site-packages (from scikit-image->echonet==1.0.0) (1.11.1)

Requirement already satisfied: networkx>=2.8 in c:\python310\lib\site-packages (from scikit-image->echonet==1.0.0) (3.1)

Requirement already satisfied: pillow>=9.0.1 in c:\python310\lib\site-packages (from scikit-image->echonet==1.0.0) (10.0.0)

Collecting imageio>=2.27 (from scikit-image->echonet==1.0.0)

Downloading https://pypi.tuna.tsinghua.edu.cn/packages/f6/37/e21e6f38b93878ba80302e95b8ccd4718d80f0c53055ccae343e606b1e2d/imageio-2.31.5-py3-none-any.whl (313 kB)

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Collecting tifffile>=2022.8.12 (from scikit-image->echonet==1.0.0)

Downloading https://pypi.tuna.tsinghua.edu.cn/packages/f5/72/68ea763b5f3e3d9871492683059ed4724fd700dbe54aa03cdda7a9692129/tifffile-2023.9.26-py3-none-any.whl (222 kB)

━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 222.9/222.9 kB 13.3 MB/s eta 0:00:00

Requirement already satisfied: packaging>=21 in c:\python310\lib\site-packages (from scikit-image->echonet==1.0.0) (23.1)

Collecting lazy\_loader>=0.3 (from scikit-image->echonet==1.0.0)

Downloading https://pypi.tuna.tsinghua.edu.cn/packages/a1/c3/65b3814e155836acacf720e5be3b5757130346670ac454fee29d3eda1381/lazy\_loader-0.3-py3-none-any.whl (9.1 kB)

Requirement already satisfied: joblib>=1.1.1 in c:\python310\lib\site-packages (from scikit-learn->echonet==1.0.0) (1.3.1)

Requirement already satisfied: threadpoolctl>=2.0.0 in c:\python310\lib\site-packages (from scikit-learn->echonet==1.0.0) (3.2.0)

Requirement already satisfied: filelock in c:\python310\lib\site-packages (from torch->echonet==1.0.0) (3.12.2)

Requirement already satisfied: typing-extensions in c:\python310\lib\site-packages (from torch->echonet==1.0.0) (4.7.1)

Requirement already satisfied: sympy in c:\python310\lib\site-packages (from torch->echonet==1.0.0) (1.12)

Requirement already satisfied: jinja2 in c:\python310\lib\site-packages (from torch->echonet==1.0.0) (3.1.2)

Requirement already satisfied: requests in c:\python310\lib\site-packages (from torchvision->echonet==1.0.0) (2.31.0)

Requirement already satisfied: six>=1.5 in c:\python310\lib\site-packages (from python-dateutil>=2.8.2->pandas->echonet==1.0.0) (1.16.0)

Requirement already satisfied: MarkupSafe>=2.0 in c:\python310\lib\site-packages (from jinja2->torch->echonet==1.0.0) (2.1.3)

Requirement already satisfied: charset-normalizer<4,>=2 in c:\python310\lib\site-packages (from requests->torchvision->echonet==1.0.0)

(3.2.0)

Requirement already satisfied: idna<4,>=2.5 in c:\python310\lib\site-packages (from requests->torchvision->echonet==1.0.0) (3.4)

Requirement already satisfied: urllib3<3,>=1.21.1 in c:\python310\lib\site-packages (from requests->torchvision->echonet==1.0.0) (1.26.16)

Successfully built echonet

Installing collected packages: tifffile, opencv-python, lazy\_loader, imageio, scikit-image, echonet

WARNING: The scripts lsm2bin.exe, tiff2fsspec.exe, tiffcomment.exe and tifffile.exe are installed in 'C:\Users\sbjwak\AppData\Roaming\Python\Python310\Scripts' which is not on PATH.

Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.

WARNING: The scripts imageio\_download\_bin.exe and imageio\_remove\_bin.exe are installed in 'C:\Users\sbjwak\AppData\Roaming\Python\Python310\Scripts' which is not on PATH.

Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.

WARNING: The script echonet.exe is installed in 'C:\Users\sbjwak\AppData\Roaming\Python\Python310\Scripts' which is not on PATH.

Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.

Successfully installed echonet-1.0.0 imageio-2.31.5 lazy\_loader-0.3 opencv-python-4.8.1.78 scikit-image-0.22.0 tifffile-2023.9.26

# Post-install

add 'C:\Users\sbjwak\AppData\Roaming\Python\Python310\Scripts' to PATH

# Verify-install

open a terminal and exec.

C:\Users\sbjwak>echonet

Usage: echonet [OPTIONS] COMMAND [ARGS]...

Entry point for command line interface.

Options:

--help Show this message and exit.

Commands:

segmentation Trains/tests segmentation model.

video Trains/tests EF prediction model.

# Training

Make a folder named as a4c-video-dir

The folder name should same as in the file example.cfg : DATA\_DIR = a4c-video-dir/

echonet segmentation --model\_name deeplabv3\_resnet101 --pretrained

Epoch #13

100%|██████████████████████████████████████████████████████████████████████████████████████████████████████████████████| 74/74 [08:29<00:00, 6.88s/it, 0.0386 (0.0401) / 0.3126 0.1352, 0.8953, 0.9236]

100%|██████████████████████████████████████████████████████████████████████████████████████████████████████████████████| 65/65 [02:41<00:00, 2.48s/it, 0.0429 (0.0473) / 0.3145 0.1385, 0.8906, 0.9194]

Epoch #14

C:\Program Files\Python311\Lib\site-packages\torchvision\models\\_utils.py:208: UserWarning: The parameter 'pretrained' is deprecated since 0.13 and may be removed in the future, please use 'weights' instead.

warnings.warn(

C:\Program Files\Python311\Lib\site-packages\torchvision\models\\_utils.py:223: UserWarning: Arguments other than a weight enum or `None` for 'weights' are deprecated since 0.13 and may be removed in the future. The current behavior is equivalent to passing `weights=None`.

warnings.warn(msg)

Downloading: "https://download.pytorch.org/models/resnet101-63fe2227.pth" to C:\Users\sbjwak/.cache\torch\hub\checkpoints\resnet101-63fe2227.pth

100%|████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████| 171M/171M [00:26<00:00, 6.70MB/s]

100%|███████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████████| 16/16 [00:27<00:00, 1.73s/it]

Epoch #0

100%|████████████████████████████████████████████████████████████████████████████████████████████████████████████████| 373/373 [37:18<00:00, 6.00s/it, 0.3635 (0.3376) / 0.3135 0.1346, 0.0046, 0.0045]

100%|██████████████████████████████████████████████████████████████████████████████████████████████████████████████████| 65/65 [01:08<00:00, 1.06s/it, 0.6246 (0.3042) / 0.3145 0.1385, 0.0000, 0.0000]

Epoch #1