Welcome to contact me if you met any problems.
Yunya (yunya.gao@plus.ac.at)
Updated: 17, March, 2023

Readme

0. Download data and codes from:

https://drive.google.com/drive/folders/19w64Z_pLfKEdgVa1JBYBi858aX9KGzcS?usp=drive_link

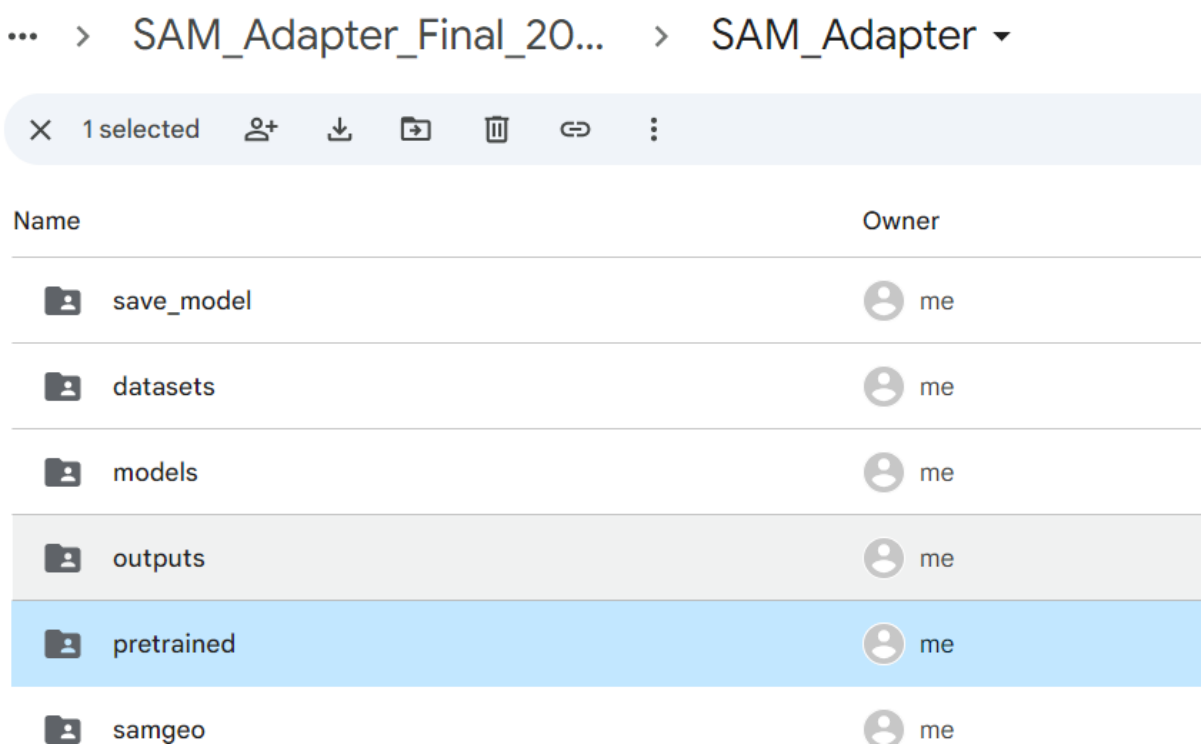
1. Change the path of data based on your own situations in the **main function** (at the last of the script) in /SAM_Adapter/run_sam/train.py and /SAM_Adapter/run_sam/inference_ft.py before using these codes.

2. Try "environment.yml" at first to create environment for both data processing and training/inferencing. It may take quite a long time.
(Change to your working directory when running commands if necessary,
e.g., *conda env create -f /home/yunya/environment.yml*)

Link for creating environment by .yml (detailed): https://conda.io/projects/conda/en/latest/user-guide/tasks/manage-environments.html#activating-an-environment
Link (short): https://shandou.medium.com/export-and-create-conda-environment-with-yml-5de619fe5a2

3. If it does not work, try to install environment based on the following steps.
Then, follow the instructions in Data_Processing_SAM.ipynb (Remember to **change working directory** at the beginning) to start processing data and SAM_Adapter_For_Building_Extraction.ipynb to start training/inferencing.

4. Attention: if you download the packages directly from Colab, it is possible that you will miss the "pretrained" folder as shown below. If it happens, please download this folder manually.



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1.Steps of installing codes for processing data for SAM

CV2 requires Python (3.7<=Python<3.11)

 # install Python (or other names if necessary)

```
conda create -n sam  python==3.10
conda activate sam
```

 # install Jupyter lab related libraries

```
conda install -c conda-forge jupyterlab -y
conda install -c conda-forge nb_conda_kernels -y
conda install ipywidgets -y
conda install -c anaconda ipykernel -y
python -m ipykernel install --user --name data --display-name "data_sam (3.10)"
```

 # install libraries related to data processing

```
conda install tqdm -y
conda install rasterio -y
conda install scipy -y
conda install imagecodecs -y
conda install scikit-learn -y
conda install scikit-image -y
conda install -c conda-forge opencv -y
conda install -c conda-forge gdal -y
conda install -c conda-forge proj geopandas -y
conda install -c conda-forge geopandas -y
```

2.Steps of installing codes for training SAM and inferencing

```
conda install pytorch==2.0.1 -y
conda install tensorboardX -y
conda install -c conda-forge segment-anything -y
pip install /home/yunya/anaconda3/envs/mmcv-1.7.0.tar.gz (change path if necessary)
conda install leafmap -y
```