A guide to debugging the source codes of *"Inf-Net: Automatic COVID-19 Lung Infection Segmentation from CT Images"* paper with Google Colab

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We are using "Google Colab".

First you must go to the "Edit" menu, then "Notebook settings" to set the "Hardware accelerator" as "GPU".

Training section

1- The problem of not finding the module named "Code".


```
ModuleNotFoundError                        Traceback (most recent call last)
<ipython-input-3-fb0aaa870a2f> in <module>
     14 import argparse
     15 from datetime import datetime
---> 16 from Code.utils.dataloader_LungInf import get_loader
     17 from Code.utils.utils import clip_gradient, adjust_lr, AvgMeter
     18 import torch.nn.functional as F

ModuleNotFoundError: No module named 'Code'

-----------------------------------------------------------------------
NOTE: If your import is failing due to a missing package, you can
manually install dependencies using either !pip or !apt.

To view examples of installing some common dependencies, click the
"Open Examples" button below.
-----------------------------------------------------------------------
```

OPEN EXAMPLES   SEARCH STACK OVERFLOW

Solved: We can solve that by following lines (note that "Inf-Net-master" is the name of main folder).


```
[4] cd '/content/Inf-Net-master'

    /content/Inf-Net-master

    import sys
    sys.path.append('/content/Inf-Net-master')
```

2- No module named 'thop'

```
----------------------------------------------------------------
ModuleNotFoundError                     Traceback (most recent call last)
<ipython-input-6-fb0aaa870a2f> in <module>
     15 from datetime import datetime
     16 from Code.utils.dataloader_LungInf import get_loader
---> 17 from Code.utils.utils import clip_gradient, adjust_lr, AvgMeter
     18 import torch.nn.functional as F
     19

/content/Inf-Net-master/Code/utils/utils.py in <module>
      2 import numpy as np
      3 # `pip install thop`
---> 4 from thop import profile
      5 from thop import clever_format
      6

ModuleNotFoundError: No module named 'thop'

----------------------------------------------------------------
NOTE: If your import is failing due to a missing package, you can
manually install dependencies using either !pip or !apt.

To view examples of installing some common dependencies, click the
"Open Examples" button below.
----------------------------------------------------------------
```
OPEN EXAMPLES   SEARCH STACK OVERFLOW

Solved:

```
pip install thop
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Collecting thop
```

3- ipykernel_launcher.py: error: unrecognized arguments: -f

```
usage: ipykernel_launcher.py [-h] [--epoch EPOCH] [--lr LR]
                             [--batchsize BATCHSIZE] [--trainsize TRAINSIZE]
                             [--clip CLIP] [--decay_rate DECAY_RATE]
                             [--decay_epoch DECAY_EPOCH] [--is_thop IS_THOP]
                             [--gpu_device GPU_DEVICE]
                             [--num_workers NUM_WORKERS]
                             [--net_channel NET_CHANNEL]
                             [--n_classes N_CLASSES] [--backbone BACKBONE]
                             [--train_path TRAIN_PATH] [--is_semi IS_SEMI]
                             [--is_pseudo IS_PSEUDO] [--train_save TRAIN_SAVE]
ipykernel_launcher.py: error: unrecognized arguments: -f /root/.local/share/jupyter/runtime/kernel-ec330661-f5d4-4b50-b53a-6059dc492585.json
An exception has occurred, use %tb to see the full traceback.

SystemExit: 2

SEARCH STACK OVERFLOW
/usr/local/lib/python3.7/dist-packages/IPython/core/interactiveshell.py:3334: UserWarning: To exit: use 'exit', 'quit', or Ctrl-D.
  warn("To exit: use 'exit', 'quit', or Ctrl-D.", stacklevel=1)
```

Solved:

```
!pip install ipykernel
```

```
import sys
sys.argv=['-f']
del sys
```

Testing section

1- module 'scipy.misc' has no attribute 'imsave'

```
---------------------------------------------------------
AttributeError                         Traceback (most recent call last)
<ipython-input-15-95a1035c6ed7> in <module>
     63
     64 if __name__ == "__main__":
---> 65     inference()

<ipython-input-15-95a1035c6ed7> in inference()
     57         res = res.sigmoid().data.cpu().numpy().squeeze()
     58         res = (res - res.min()) / (res.max() - res.min() + 1e-8)
---> 59         misc.imsave(opt.save_path + name, res)
     60
     61     print('Test Done!')

AttributeError: module 'scipy.misc' has no attribute 'imsave'
```

SEARCH STACK OVERFLOW

Solved: "scipy.misc.imsave" has been deprecated in newer Scipy versions.
We should change our code according to following photo.

```
#misc.imsave(opt.save_path + name, res)
import imageio
imageio.imwrite(opt.save_path + name, res)
```