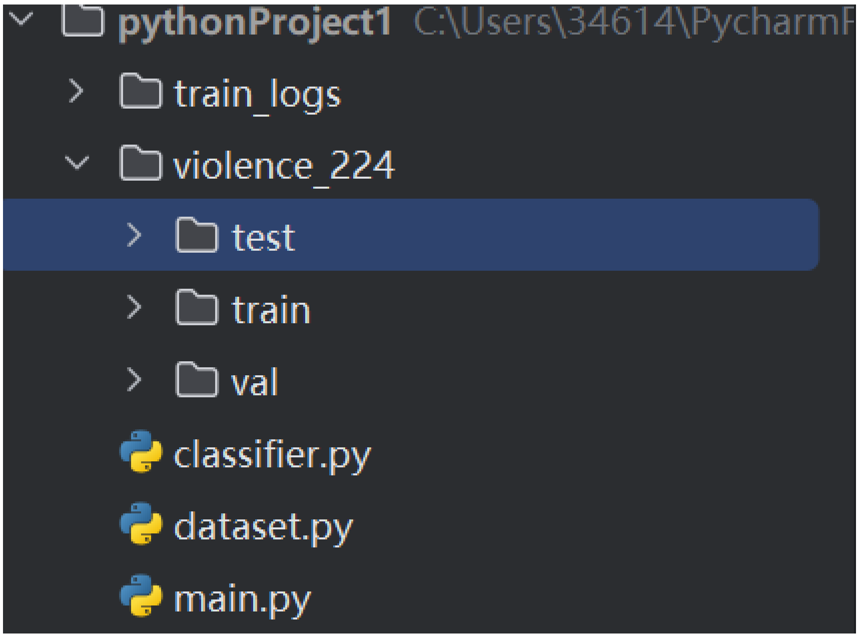
下面以main.py说明如何调用接口文件

文件结构要求 main.py,classifier.py,dataset.py须和violence_224文件夹处于同一个项目内， 并且violence_224文件夹下有train,val,test三个目录，分别放着训练数据，相关数据和测试数据 文件结构如下



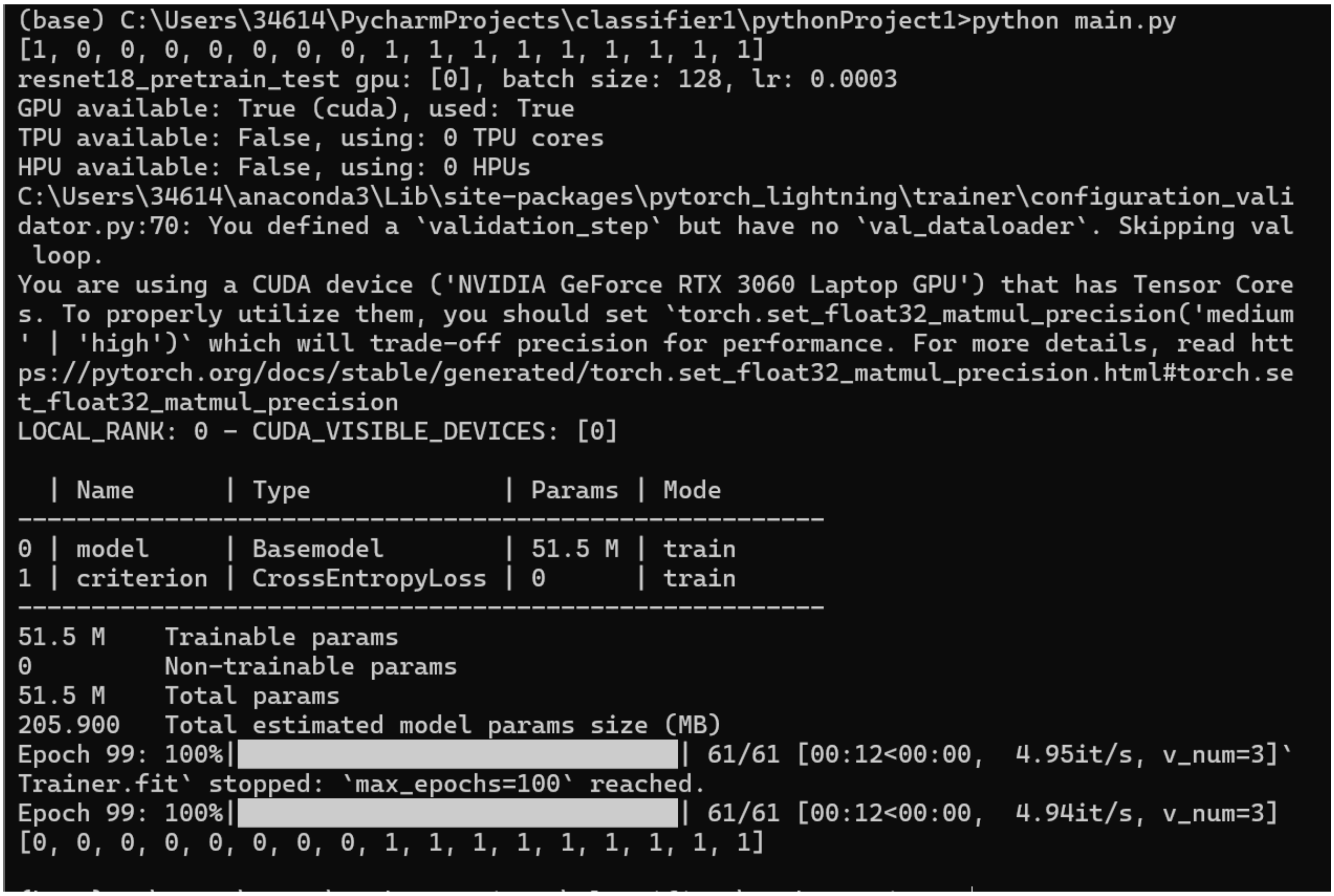
```
pythonProject1 C:\Users\34614\PycharmP
    train_logs
    violence_224
        test
        train
        val
    classifier.py
    dataset.py
    main.py
```

main.py的代码

```
from classifier import ViolenceClassifier
from dataset import CustomDataModule

if __name__ == '__main__':
    data_module = CustomDataModule(batch_size=128)
    data_module.setup()
    classifier=ViolenceClassifier()
    print(classifier.classify1(data_module.test_dataset.convert_to_tensor()))
    print(classifier.classify(data_module.test_dataset.convert_to_tensor()))
```

data_module负责数据加载，通过调用setup函数，可以利用violence ViolenceClassifier 提供两个接口函数，一个是classify1，这个函数从已有的checkpoint处加载模型，另外一个是classfy，这个函数对模型进行重新训练，并且将训练的模型对测试集进行预测。具体只需要在anaconda环境中运行main.py代码即可，以下是运行代码后得到的一个示例



```
(base) C:\Users\34614\PycharmProjects\classifier1\pythonProject1>python main.py
[1, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1]
resnet18_pretrain_test gpu: [0], batch size: 128, lr: 0.0003
GPU available: True (cuda), used: True
TPU available: False, using: 0 TPU cores
HPU available: False, using: 0 HPUs
C:\Users\34614\anaconda3\Lib\site-packages\pytorch_lightning\trainer\configuration_vali
dator.py:70: You defined a `validation_step` but have no `val_dataloader`. Skipping val
 loop.
You are using a CUDA device ('NVIDIA GeForce RTX 3060 Laptop GPU') that has Tensor Core
s. To properly utilize them, you should set `torch.set_float32_matmul_precision('medium
' | 'high')` which will trade-off precision for performance. For more details, read htt
ps://pytorch.org/docs/stable/generated/torch.set_float32_matmul_precision.html#torch.se
t_float32_matmul_precision
LOCAL_RANK: 0 - CUDA_VISIBLE_DEVICES: [0]

  | Name      | Type             | Params | Mode
-------------------------------------------------------
0 | model     | Basemodel        | 51.5 M | train
1 | criterion | CrossEntropyLoss | 0      | train
-------------------------------------------------------
51.5 M    Trainable params
0         Non-trainable params
51.5 M    Total params
205.900   Total estimated model params size (MB)
Epoch 99: 100%|██████████████████████████████| 61/61 [00:12<00:00,  4.95it/s, v_num=3]`
Trainer.fit` stopped: `max_epochs=100` reached.
Epoch 99: 100%|██████████████████████████████| 61/61 [00:12<00:00,  4.94it/s, v_num=3]
[0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1]
```

第一行是利用已经存在的断点进行预测，第二个预测结果是对重新训练后对测试集进行预测，实际上的测试集的顺序是[0,0,0,0,0,0,0,0,1,1,1,1,1,1,1,1,1]跟结果二相吻合