模型训练源代码：regression.ipynb文件 和 regression.py文件

测试接口：test_interface_regression.ipynb文件

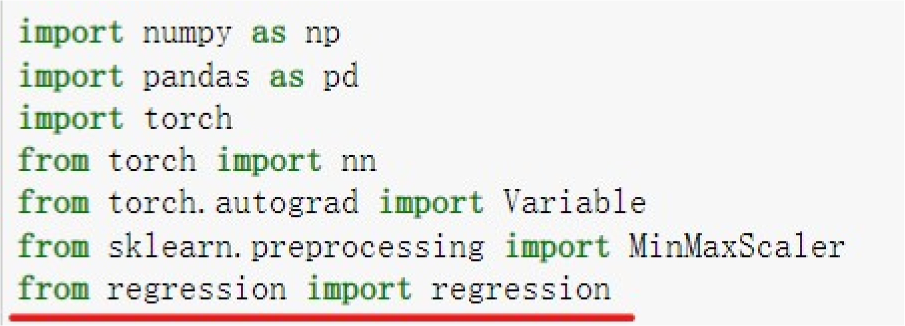
模型：model_regression.pkl

训练集：3_train_regression.csv

报告：Report_regression

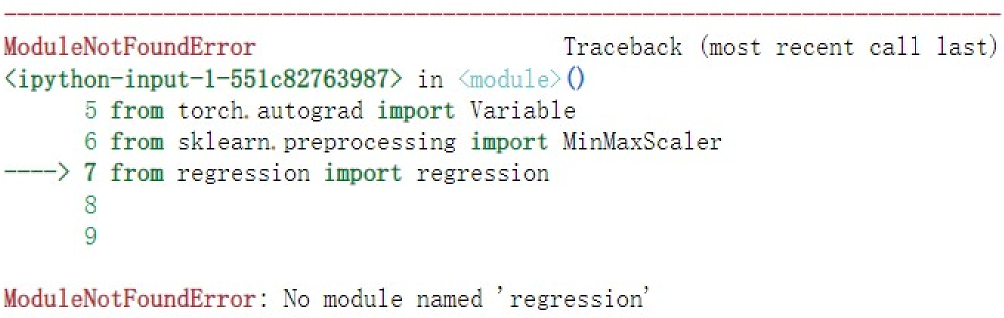
总共6个文件

如果用jupyter notebook打开测试接口，由于我们测试接口中导入了regression.py中的模块



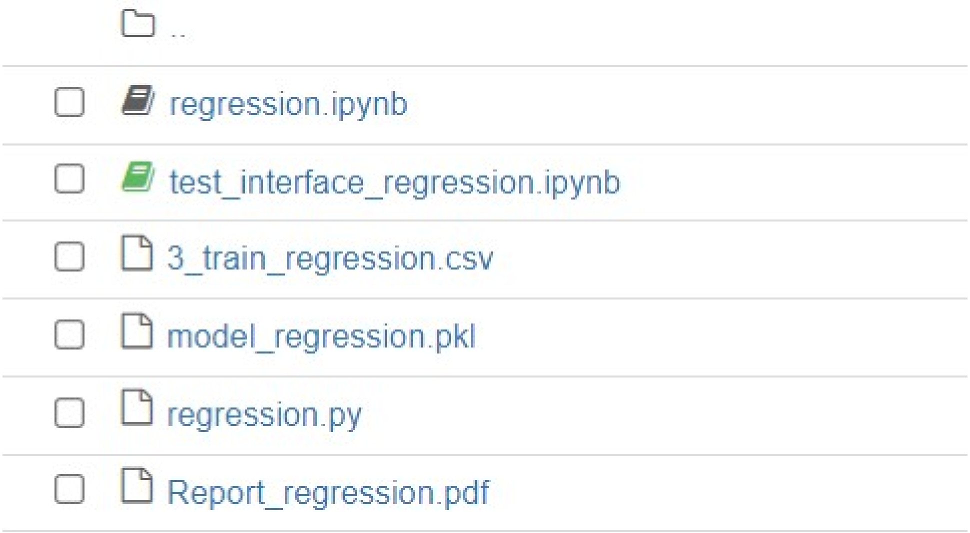
```
import numpy as np
import pandas as pd
import torch
from torch import nn
from torch.autograd import Variable
from sklearn.preprocessing import MinMaxScaler
from regression import regression
```

因此，使用jupyter notebook打开上传test_interface_regression.ipynb时**一定要把regression.py 也上传过去**，否则会报错，如图



```
---------------------------------------------------------------------------
ModuleNotFoundError                       Traceback (most recent call last)
<ipython-input-1-551c82763987> in <module>()
      5 from torch.autograd import Variable
      6 from sklearn.preprocessing import MinMaxScaler
----> 7 from regression import regression
      8 
      9 

ModuleNotFoundError: No module named 'regression'
```

最后jupyter notebook文件夹中应包含这些文件，**再加上一个测试集**共7个文件



..

☐ regression.ipynb

☐ test_interface_regression.ipynb

☐ 3_train_regression.csv

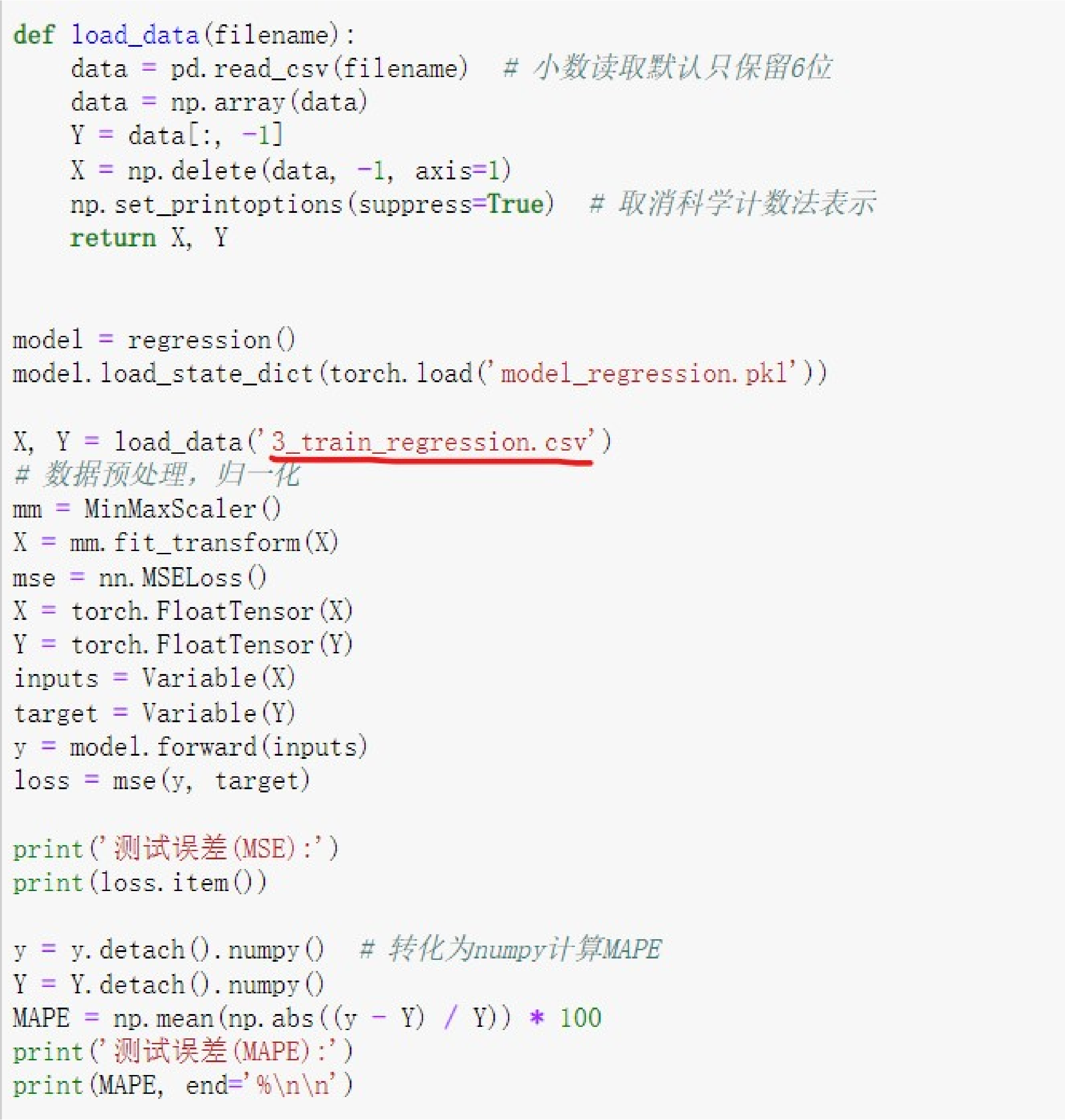
☐ model_regression.pkl

☐ regression.py

☐ Report_regression.pdf

导入数据步骤

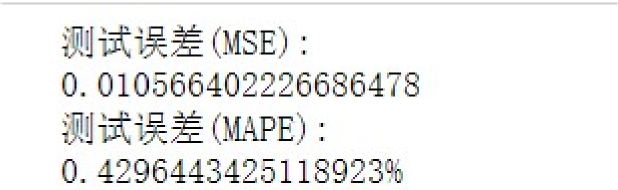
1、打开test_interface_regression.ipynb文件



```
def load_data(filename):
    data = pd.read_csv(filename)  # 小数读取默认只保留6位
    data = np.array(data)
    Y = data[:, -1]
    X = np.delete(data, -1, axis=1)
    np.set_printoptions(suppress=True)  # 取消科学计数法表示
    return X, Y


model = regression()
model.load_state_dict(torch.load('model_regression.pkl'))

X, Y = load_data('3_train_regression.csv')
# 数据预处理，归一化
mm = MinMaxScaler()
X = mm.fit_transform(X)
mse = nn.MSELoss()
X = torch.FloatTensor(X)
Y = torch.FloatTensor(Y)
inputs = Variable(X)
target = Variable(Y)
y = model.forward(inputs)
loss = mse(y, target)

print('测试误差(MSE):')
print(loss.item())

y = y.detach().numpy()  # 转化为numpy计算MAPE
Y = Y.detach().numpy()
MAPE = np.mean(np.abs((y - Y) / Y)) * 100
print('测试误差(MAPE):')
print(MAPE, end='%\n\n')
```

在该处填写测试集的文件名（或者添加测试集路径）

点击运行，会输出MAPE误差



```
测试误差(MSE):
0.010566402226686478
测试误差(MAPE):
0.4296443425118923%
```