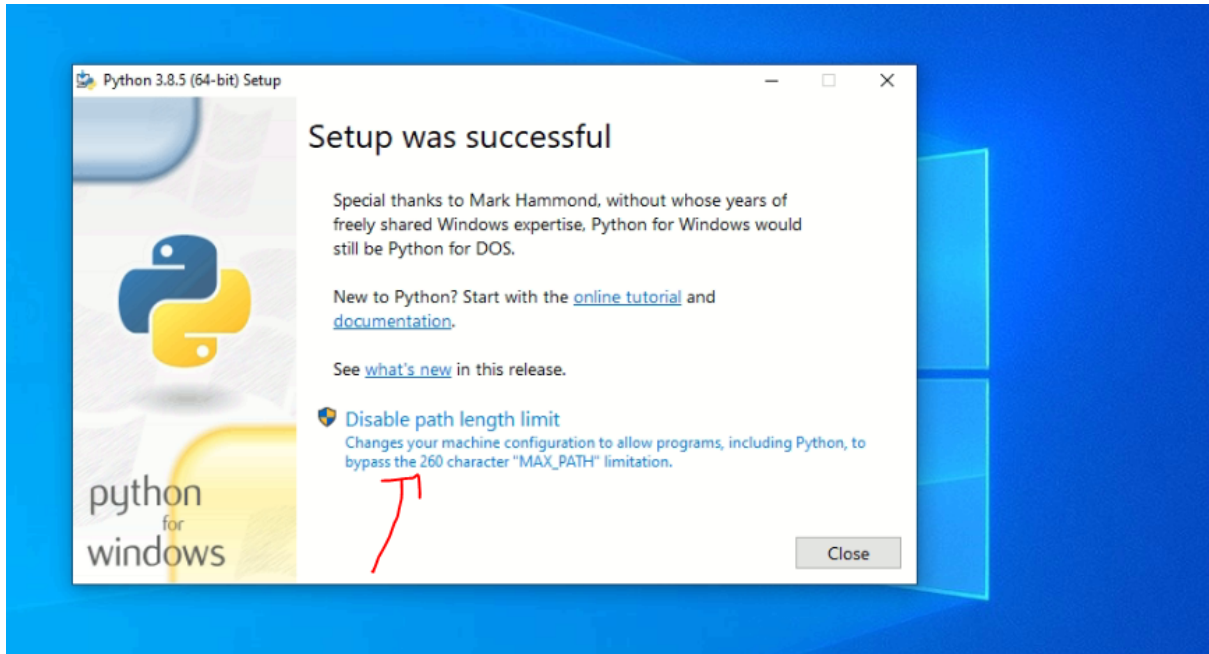


- Preparing environment:
Install python 3.8.x
We used:
<https://www.python.org/ftp/python/3.8.5/python-3.8.5-amd64.exe>

While installing make sure u disabled path length limit



Open cmd prompt and navigate to the root folder of the project where a requirements.txt exists.

Execute this command:

```
pip install -r requirements.txt
```

It will install all the dependencies with the proper version.

In our case we had this beautiful view without any error or warning:

```
Command Prompt - python main.py
C:\Users\... \Desktop\E2E_FlareClassification>pip install -r requirements.txt
Collecting cycler==0.10.0
  Downloading cycler-0.10.0-py2.py3-none-any.whl (6.5 kB)
Collecting joblib==1.0.1
  Downloading joblib-1.0.1-py3-none-any.whl (303 kB)
Collecting kiwisolver==1.3.1
  Downloading kiwisolver-1.3.1-cp38-cp38-win_amd64.whl (51 kB)
Collecting matplotlib==3.4.2
  Downloading matplotlib-3.4.2-cp38-cp38-win_amd64.whl (7.1 MB)
Collecting numpy==1.20.3
  Downloading numpy-1.20.3-cp38-cp38-win_amd64.whl (13.7 MB)
Collecting pandas==1.2.4
  Downloading pandas-1.2.4-cp38-cp38-win_amd64.whl (9.3 MB)
Collecting Pillow==8.2.0
  Downloading Pillow-8.2.0-cp38-cp38-win_amd64.whl (2.2 MB)
Collecting pyparsing==2.4.7
  Downloading pyparsing-2.4.7-py2.py3-none-any.whl (67 kB)
Collecting python-dateutil==2.8.1
  Downloading python-dateutil-2.8.1-py2.py3-none-any.whl (227 kB)
Collecting pytz==2021.1
  Downloading pytz-2021.1-py2.py3-none-any.whl (510 kB)
Collecting scikit-learn==0.24.2
  Downloading scikit_learn-0.24.2-cp38-cp38-win_amd64.whl (6.9 MB)
Collecting scipy==1.7.0
  Downloading scipy-1.7.0-cp38-cp38-win_amd64.whl (33.7 MB)
Collecting seaborn==0.11.1
  Downloading seaborn-0.11.1-py3-none-any.whl (285 kB)
Collecting six==1.16.0
  Downloading six-1.16.0-py2.py3-none-any.whl (11 kB)
Collecting sklearn==0.0
  Downloading sklearn-0.0.tar.gz (1.1 kB)
Collecting threadpoolctl==2.1.0
  Downloading threadpoolctl-2.1.0-py3-none-any.whl (12 kB)
Collecting torch==1.9.0
  Downloading torch-1.9.0-cp38-cp38-win_amd64.whl (222.0 MB)
Collecting typing-extensions==3.10.0.0
  Downloading typing_extensions-3.10.0.0-py3-none-any.whl (26 kB)
Using legacy setup.py install for sklearn, since package 'wheel' is not installed.
Installing collected packages: six, cycler, joblib, kiwisolver, python-dateutil, Pillow, pyparsing, numpy, matplotlib, pytz, pandas, threadpoolctl, scipy, scikit-learn, seaborn, sklearn, typing-extensions, torch
Running setup.py install for sklearn ... done
Successfully installed Pillow-8.2.0 cycler-0.10.0 joblib-1.0.1 kiwisolver-1.3.1 matplotlib-3.4.2 numpy-1.20.3 pandas-1.2.4 pyparsing-2.4.7 python-dateutil-2.8.1 pytz-2021.1 scikit-learn-0.24.2 scipy-1.7.0 seaborn-0.11.1 six-1.16.0 skl
n-0.0 threadpoolctl-2.1.0 torch-1.9.0 typing-extensions-3.10.0.0
WARNING: You are using pip version 20.1.1; however, version 21.1.3 is available.
You should consider upgrading via the 'c:\users\... \AppData\Local\Programs\Python\Python38\python.exe -m pip install --upgrade pip' command.

C:\Users\... \Desktop\E2E_FlareClassification>python main.py
Processing in : Cpu
trainData.shape: (1540, 33, 60)
trainLabel.shape: (1540,)
Classes/labels : [0 1 2 3]
```

- 1) In some cases you might be required to execute this command before proceeding to the previous cmd.

```
pip install wheel
```

If you are using anaconda or any other kind of python environment where pip cmd not available then make sure to install the dependencies with proper version listed in requirements.txt

- Once all dependencies installed , you can lunch the project using cmd:
Python main.py

In previous image you can check the initial output of this cmd.

Here is ending part:

```
class : 0
p.mean(precision)      p.mean(recall)      p.mean(f1_score) :
0.3492063492063492
0.39285714285714285
0.3697478991596638

p.mean p.std(precision)      p.mean p.std(recall)      p.mean p.std(f1_score) :
0.35 +- 0.0
0.39 +- 0.0
0.37 +- 0.0

class : 1
p.mean(precision)      p.mean(recall)      p.mean(f1_score) :
0.391304347826087
0.3543307086614173
0.371900826446281

p.mean p.std(precision)      p.mean p.std(recall)      p.mean p.std(f1_score) :
0.39 +- 0.0
0.35 +- 0.0
0.37 +- 0.0

class : 2
p.mean(precision)      p.mean(recall)      p.mean(f1_score) :
0.36666666666666664
0.2972972972972973
0.3283582089552239

p.mean p.std(precision)      p.mean p.std(recall)      p.mean p.std(f1_score) :
0.37 +- 0.0
0.3 +- 0.0
0.33 +- 0.0

class : 3
p.mean(precision)      p.mean(recall)      p.mean(f1_score) :
0.42748091603053434
0.5
0.46090534979423864

p.mean p.std(precision)      p.mean p.std(recall)      p.mean p.std(f1_score) :
0.43 +- 0.0
0.5 +- 0.0
0.46 +- 0.0
```

Note:

So far we have tested it in pycharm using the Windows 10 environment .
But actually experiment was done in anaconda's jupyter notebook

- You can tweak this variables in main.py:

```
test_sizes = [0.3]
HIDDEN_DIMS = [128]
num_masterIteration = 1
numEpochs = 1
```