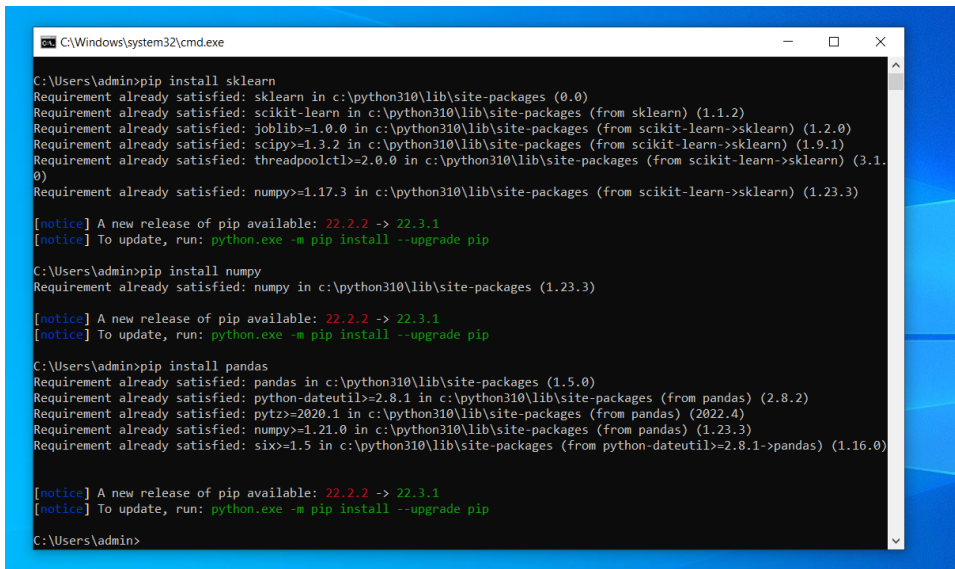


TEAM ID: PNT2022TMID14806

Installation of python package

i) Install sklearn, numpy and pandas packages



```
C:\Windows\system32\cmd.exe

C:\Users\admin>pip install sklearn
Requirement already satisfied: sklearn in c:\python310\lib\site-packages (0.0)
Requirement already satisfied: scikit-learn in c:\python310\lib\site-packages (from sklearn) (1.1.2)
Requirement already satisfied: joblib>=1.0.0 in c:\python310\lib\site-packages (from scikit-learn->sklearn) (1.2.0)
Requirement already satisfied: scipy>=1.3.2 in c:\python310\lib\site-packages (from scikit-learn->sklearn) (1.9.1)
Requirement already satisfied: threadpoolctl>=2.0.0 in c:\python310\lib\site-packages (from scikit-learn->sklearn) (3.1.0)
Requirement already satisfied: numpy>=1.17.3 in c:\python310\lib\site-packages (from scikit-learn->sklearn) (1.23.3)

[notice] A new release of pip available: 22.2.2 -> 22.3.1
[notice] To update, run: python.exe -m pip install --upgrade pip

C:\Users\admin>pip install numpy
Requirement already satisfied: numpy in c:\python310\lib\site-packages (1.23.3)

[notice] A new release of pip available: 22.2.2 -> 22.3.1
[notice] To update, run: python.exe -m pip install --upgrade pip

C:\Users\admin>pip install pandas
Requirement already satisfied: pandas in c:\python310\lib\site-packages (1.5.0)
Requirement already satisfied: python-dateutil>=2.8.1 in c:\python310\lib\site-packages (from pandas) (2.8.2)
Requirement already satisfied: pytz>=2020.1 in c:\python310\lib\site-packages (from pandas) (2022.4)
Requirement already satisfied: numpy>=1.21.0 in c:\python310\lib\site-packages (from pandas) (1.23.3)
Requirement already satisfied: six>=1.5 in c:\python310\lib\site-packages (from python-dateutil>=2.8.1->pandas) (1.16.0)

[notice] A new release of pip available: 22.2.2 -> 22.3.1
[notice] To update, run: python.exe -m pip install --upgrade pip

C:\Users\admin>
```

ii) Install matplotlib and seaborn packages

```
C:\Windows\system32\cmd.exe
C:\Users\admin>pip install matplotlib
Requirement already satisfied: matplotlib in c:\python310\lib\site-packages (3.6.0)
Requirement already satisfied: fonttools>=4.22.0 in c:\python310\lib\site-packages (from matplotlib) (4.37.4)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\python310\lib\site-packages (from matplotlib) (1.4.4)
Requirement already satisfied: python-dateutil>=2.7 in c:\python310\lib\site-packages (from matplotlib) (2.8.2)
Requirement already satisfied: packaging>=20.0 in c:\python310\lib\site-packages (from matplotlib) (21.3)
Requirement already satisfied: contourpy>=1.0.1 in c:\python310\lib\site-packages (from matplotlib) (1.0.5)
Requirement already satisfied: cycler>=0.10 in c:\python310\lib\site-packages (from matplotlib) (0.11.0)
Requirement already satisfied: pyparsing>=2.2.1 in c:\python310\lib\site-packages (from matplotlib) (3.0.9)
Requirement already satisfied: pillow>=6.2.0 in c:\python310\lib\site-packages (from matplotlib) (9.2.0)
Requirement already satisfied: numpy>=1.19 in c:\python310\lib\site-packages (from matplotlib) (1.23.3)
Requirement already satisfied: six>=1.5 in c:\python310\lib\site-packages (from python-dateutil>=2.7->matplotlib) (1.16.0)

[notice] A new release of pip available: 22.2.2 -> 22.3.1
[notice] To update, run: python.exe -m pip install --upgrade pip

C:\Users\admin>pip install seaborn
Requirement already satisfied: seaborn in c:\python310\lib\site-packages (0.12.0)
Requirement already satisfied: pandas>=0.25 in c:\python310\lib\site-packages (from seaborn) (1.5.0)
Requirement already satisfied: matplotlib>=3.1 in c:\python310\lib\site-packages (from seaborn) (3.6.0)
Requirement already satisfied: numpy>=1.17 in c:\python310\lib\site-packages (from seaborn) (1.23.3)
Requirement already satisfied: contourpy>=1.0.1 in c:\python310\lib\site-packages (from matplotlib>=3.1->seaborn) (1.0.5)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\python310\lib\site-packages (from matplotlib>=3.1->seaborn) (1.4.4)
Requirement already satisfied: pyparsing>=2.2.1 in c:\python310\lib\site-packages (from matplotlib>=3.1->seaborn) (3.0.9)
Requirement already satisfied: packaging>=20.0 in c:\python310\lib\site-packages (from matplotlib>=3.1->seaborn) (21.3)
Requirement already satisfied: fonttools>=4.22.0 in c:\python310\lib\site-packages (from matplotlib>=3.1->seaborn) (4.37.4)
Requirement already satisfied: cycler>=0.10 in c:\python310\lib\site-packages (from matplotlib>=3.1->seaborn) (0.11.0)
Requirement already satisfied: python-dateutil>=2.7 in c:\python310\lib\site-packages (from matplotlib>=3.1->seaborn) (2.8.2)
Requirement already satisfied: pillow>=6.2.0 in c:\python310\lib\site-packages (from matplotlib>=3.1->seaborn) (9.2.0)
Requirement already satisfied: pytz>=2020.1 in c:\python310\lib\site-packages (from pandas>=0.25->seaborn) (2022.4)
Requirement already satisfied: six>=1.5 in c:\python310\lib\site-packages (from python-dateutil>=2.7->matplotlib>=3.1->seaborn) (1.16.0)

[notice] A new release of pip available: 22.2.2 -> 22.3.1
[notice] To update, run: python.exe -m pip install --upgrade pip

C:\Users\admin>
```

iii) Checking whether the package is installed and import packages to python

```
C:\Windows\system32\cmd.exe
C:\Users\admin>python
Python 3.10.7 (tags/v3.10.7:6cc6b13, Sep 5 2022, 14:08:36) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> import numpy
>>> import pandas
>>> import matplotlib
>>> import seaborn
>>> quit()

C:\Users\admin>
```

iv) Install tensorflow package

```
C:\Windows\system32\cmd.exe
C:\Users\admin>pip install tensorflow==2.8.0
Requirement already satisfied: tensorflow==2.8.0 in c:\users\admin\appdata\local\programs\python\python310\lib\site-packages (2.8.0)
Requirement already satisfied: libclang<9.0.0,>=9.0.1 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (14.0.6)
Requirement already satisfied: six>1.12.0 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (1.16.0)
Requirement already satisfied: tensorflow-io-gcs-filesystem==0.23.1 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (0.23.0)
Requirement already satisfied: dlpack==0.4.0 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (1.2.0)
Requirement already satisfied: tf-estimator-nightly==2.8.0.dev2021122109 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (2.8.0.dev2021122109)
Requirement already satisfied: wrapt>1.11.0 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (1.14.1)
Requirement already satisfied: termcolor==1.1.0 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (2.0.1)
Requirement already satisfied: numpy>=1.20 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (1.23.3)
Requirement already satisfied: Cython==0.29.21 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (0.29.21)
Requirement already satisfied: grpcio<0.4.0,>=1.24.1 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (1.40.1)
Requirement already satisfied: setuptools in c:\python310\lib\site-packages (from tensorflow==2.8.0) (63.2.0)
Requirement already satisfied: gast==0.2.1 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (0.4.0)
Requirement already satisfied: opt-einsum==2.3.2 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (3.3.0)
Requirement already satisfied: protobuf>3.9.2 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (3.19.6)
Requirement already satisfied: typing-extensions==3.6.6 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (4.4.0)
Requirement already satisfied: astunparse==1.6.0 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (1.6.3)
Requirement already satisfied: keras==2.9.0 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (2.9.0)
Requirement already satisfied: keras-preprocessing==1.1.1 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (1.1.1)
Requirement already satisfied: google-pasta==0.1.1 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (0.2.0)
Requirement already satisfied: wheel<0.40,>=0.29.0 in c:\python310\lib\site-packages (from astunparse==1.6.0->tensorflow==2.8.0) (0.37.1)
Requirement already satisfied: requests<3,>=2.21.0 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (2.28.1)
Requirement already satisfied: tensorflow-plugin-wire==1.6.0 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (1.8.1)
Requirement already satisfied: werkzeug==0.11.15 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (2.2.2)
Requirement already satisfied: google-auth-oauthlib==0.5.0 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (0.4.6)
Requirement already satisfied: tensorflow-data-server==0.7.0 in c:\python310\lib\site-packages (from tensorflow==2.8.0) (0.4.1)
Requirement already satisfied: cachetools<4.0,>=2.0.0 in c:\python310\lib\site-packages (from google-auth==1.6.3->tensorflow==2.8.0) (5.2.0)
Requirement already satisfied: pyasn1-modules==0.2.1 in c:\python310\lib\site-packages (from google-auth==1.6.3->tensorflow==2.8.0) (0.2.8)
Requirement already satisfied: rsa<4,>=1.4 in c:\python310\lib\site-packages (from google-auth==1.6.3->tensorflow==2.8.0) (4.9)
Requirement already satisfied: requests-oauthlib==0.8.0 in c:\python310\lib\site-packages (from google-auth-oauthlib==0.5.0->tensorflow==2.8.0) (1.3.1)
Requirement already satisfied: certifi==2021.4.12 in c:\python310\lib\site-packages (from requests==2.21.0->tensorflow==2.8.0) (2022.9.24)
Requirement already satisfied: idna<4,>=2.3 in c:\python310\lib\site-packages (from requests==2.21.0->tensorflow==2.8.0) (3.4)
Requirement already satisfied: charset-normalizer<3,>=2 in c:\python310\lib\site-packages (from requests==2.21.0->tensorflow==2.8.0) (2.1.1)
Requirement already satisfied: MarkupSafe==2.1.1 in c:\python310\lib\site-packages (from werkzeug==0.11.15->tensorflow==2.8.0) (2.1.1)
Requirement already satisfied: pyasn1==0.5.0 in c:\python310\lib\site-packages (from pyasn1-modules==0.2.1->google-auth==1.6.3->tensorflow==2.8.0) (0.4.8)
Requirement already satisfied: oauthlib==3.0.0 in c:\python310\lib\site-packages (from requests-oauthlib==0.8.0->google-auth-oauthlib==0.5.0->tensorflow==2.8.0) (3.2.1)

[notice] A new release of pip available: 22.2.2 -> 22.3.1
[notice] To update, run: python.exe -m pip install --upgrade pip
C:\Users\admin>
```

v) Install keras and opencv package

```
Select C:\Windows\system32\cmd.exe
C:\Users\admin>pip install keras==2.8.0
Requirement already satisfied: keras==2.8.0 in c:\python310\lib\site-packages (2.8.0)

[notice] A new release of pip available: 22.2.2 -> 22.3.1
[notice] To update, run: python.exe -m pip install --upgrade pip
C:\Users\admin>pip install opencv-python
Requirement already satisfied: opencv-python in c:\python310\lib\site-packages (4.6.0.66)
Requirement already satisfied: numpy==1.21.2 in c:\python310\lib\site-packages (from opencv-python) (1.23.3)

[notice] A new release of pip available: 22.2.2 -> 22.3.1
[notice] To update, run: python.exe -m pip install --upgrade pip
C:\Users\admin>
```

vi) Checking whether the packages are installed and importing packages in python

```
C:\Windows\system32\cmd.exe - python
C:\Users\admin>python
Python 3.10.7 (tags/v3.10.7:6cc6b13, Sep 5 2022, 14:08:36) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> import tensorflow
2022-11-12 20:01:33.470672: W tensorflow/stream_executor/platform/default/dso_loader.cc:64] Could not load dynamic library 'cudart64_110.dll'; dlerror: cudart64_110.dll not found
2022-11-12 20:01:33.470906: I tensorflow/stream_executor/cuda/cudart_stub.cc:29] Ignore above cudart dlerror if you do not have a GPU set up on your machine.
>>> import keras
>>> import cv2
>>> tensorflow.__version__
'2.8.0'
>>> keras.__version__
'2.8.0'
>>> cv2.__version__
'4.6.0'
>>>
```