FeatureScaling

PNT2022TMID31476

```
importnumpyas npimportpandasas
pdimport seabornassns
importmatplotlib.pyplotaspltfr
o mnumpy importasarray
      fromsklearn.preprocessingimportStandardScalerds=pd.rea
      d_csv(r"/content/Crude-Oil-Prices-Daily.csv")ds.head()
```

```
       DateClosingValue01/
2/1986               25.56
11/3/1986            26.00
21/6/1986            26.53
31/7/1986            25.85
41/8/1986            25.87
ds.describe()
```

```
       ClosingValue
count    8216.000000
mean       43.492139
std        29.616804
min        10.250000
25%        19.577500
50%        29.610000
75%        63.402500
max       145.310000
```

#Scaling

```
x = ds.iloc[:,1:3].values
print("\nOriginaldata values:\n",  x)
```

```
Originaldatavalues:[[2
 5.56]
 [26.]
 [26.53] ...
 [73.05]
 [73.78]
 [73.93]] fromsklearn import
```

```
preprocessing min_max_scaler=
```

```
preprocessing.MinMaxScaler(feat
```

```
ure_range=(0,1))x_after_min_max
```

```
_scale r=

min_max_scaler.fit_transform(x)

print (x_after_min_max_scaler)


[[0.11335703] [0.11661484]
 [0.12053902]
 ...[0.464978
 53]
 [0.47038353]
 [0.47149415]]

Standardisation=preprocessing.StandardScaler()x_after_Standard
isation =
Standardisation.fit_transform(x)print(x_after_Standardisation)

[[-0.60550861]
 [-0.59065128]
 [-0.57275494] ...
 [0.99807057]
 [1.02272024]
 [1.02778524]]
```