FeatureScaling

PNT2022TMID36951

```
importnumpyas
npimportpandasas
pdimport seabornassns
importmatplotlib.pyplotaspltfro
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(feature_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]]
```