LAB11

August 25, 2019

[2]:
```
import numpy as np
import pandas as pd
from sklearn.preprocessing import MinMaxScaler,StandardScaler
```

```
/home/rahul/anaconda3/lib/python3.7/importlib/_bootstrap.py:219: RuntimeWarning:
numpy.ufunc size changed, may indicate binary incompatibility. Expected 216, got
192
  return f(*args, **kwds)
/home/rahul/anaconda3/lib/python3.7/importlib/_bootstrap.py:219: RuntimeWarning:
numpy.ufunc size changed, may indicate binary incompatibility. Expected 216, got
192
  return f(*args, **kwds)
```

[5]:
```
datasets = pd.read_csv('Data_for_Transformation.csv')
print('\nData : \n',datasets)
```

```
Data :
     Country  Age  Salary Purchased
0    France   44   72000        No
1     Spain   27   48000       Yes
2   Germany   30   54000        No
3     Spain   38   61000        No
4   Germany   40   68000       Yes
5    France   35   58000       Yes
6     Spain   39   52000        No
7    France   48   79000       Yes
8   Germany   50   83000        No
9    France   37   67000       Yes
10    Spain   45   55000        No
```

[8]:
```
X = datasets.iloc[:,:-1].values
Y = datasets.iloc[:,:-1].values
X_new = datasets.iloc[:,1:3].values
print("\n\nX for transformation : \n",X_new)
```

```
X for transformation :
 [[   44 72000]
 [   27 48000]
 [   30 54000]
 [   38 61000]
 [   40 68000]
 [   35 58000]
 [   39 52000]
 [   48 79000]
 [   50 83000]
 [   37 67000]
 [   45 55000]]
```

[10]:
```
scaler = MinMaxScaler()
X_scaled = scaler.fit_transform(X_new)
print("\n\nScaled X : \n",X_scaled)
```

```
Scaled X :
 [[0.73913043 0.68571429]
 [0.         0.        ]
 [0.13043478 0.17142857]
 [0.47826087 0.37142857]
 [0.56521739 0.57142857]
 [0.34782609 0.28571429]
 [0.52173913 0.11428571]
 [0.91304348 0.88571429]
 [1.         1.        ]
 [0.43478261 0.54285714]
 [0.7826087  0.2       ]]
```

[12]:
```
std = StandardScaler()
X_std = std.fit_transform(X_new)
print("\n\nStanderdization X :\n",X_std)
```

```
Standerdization X :
 [[ 0.68188156  0.79548755]
 [-1.81835082 -1.41513049]
 [-1.37713334 -0.86247598]
 [-0.2005534  -0.21771238]
 [ 0.09359159  0.42705121]
 [-0.64177088 -0.49403964]
```

```
[-0.05348091 -1.04669415]
[ 1.27017153  1.44025115]
[ 1.56431652  1.80868749]
[-0.34762589  0.33494213]
[ 0.82895405 -0.77036689]]
```

[ ]: