Exp. No-10

Date:

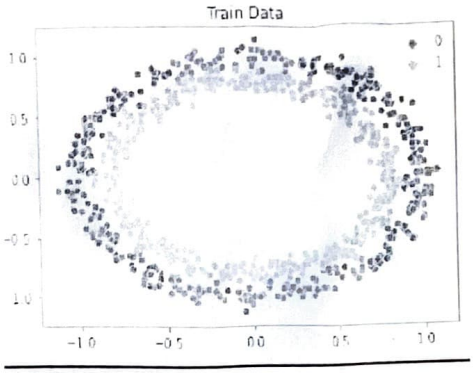
Implementing artificial neural networks for an application using python - classification

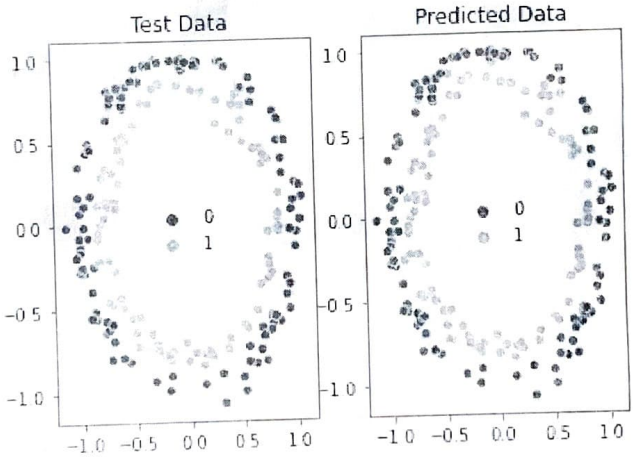
Aim:

To implement artificial neural networks for an application in classification using python.

Code:

```
sklearn.model_selection import train_test_split
from sklearn.datasets import make_circles import
from sklearn.neural_network import MLPClassification
from numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
% matplotlib inline
x_train, y_train = make_circles(N_samples = 300, noise= 0.05)
x_test, y_test = make_circles (N_samples = 300, Noise = 0.05)
sns. scatterplot (x_train [:,0] , x_train [:,1], hue = y_train)
plt.title ("train data").
plt.show ()
if = MLP classifier (max_iter =1000)
if. fit (x_train, y_train)
y_pred = if. predict (x_test)
fig. ax = plt. subplots (1,2)
sns. scatterplot (x_test [:,0],
    x_test [:,1], hue = y_pred; ax = ax[0])
plt.show ()
```





RESULT:

Thus the program was successfully executed and the output was verified.