Expno 9
Date :

Implementing Artificial Neural Networks for ANN Application using Python - Classification

AIM

TO implementing ANN for an application in classification using python.

Source Code:

```
Sklearn.model_selection import train_test_split
from Sklearn.datasets import make_circles
Import from Sklearn.neural_network import MLPClassifier
from numpy as np
Import matplotlib.pyplot as plt
Import Seaborn as sns
% matplotlib inline.

X_train, Y_train = make_circles(n_samples=700,
                                noise=0.05)

X_test, Y_test = make_circles(n_samples=30,
                              noise=0.05)
sns.scatter(X_train[:,0], X_train[:,1], hue=Y_train)
plt.title("Train Data")
plt.show()
clf = MLPClassifier(max_iter=1000)
clf.fit(X_train, Y_train)
Print("{clf.score(X_train, Y_train)}")
Print("{clf.score(X_test, Y_test)}")
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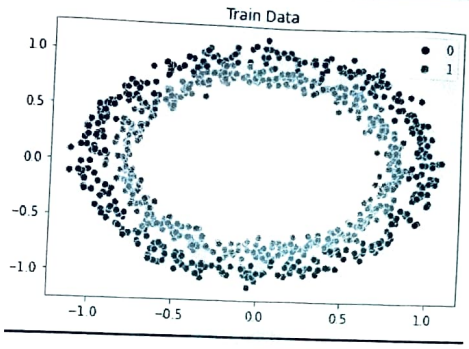
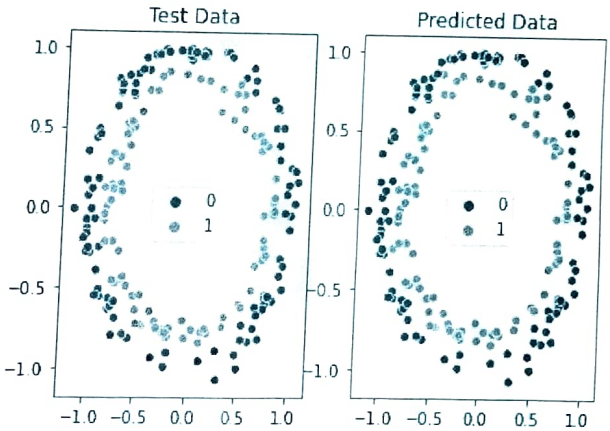
```
y_pred = clf.predict(x_test)
fig, ax = plt.subplots(1,2)
sns.scatterplot(x_test[:,0], x_test[:,1], hue=y)
plt.show()
```

Output



OUTPUT :



Result:

Thus the ANN Program executed Successfully for classification