Exp No : 11
Date :

Artificial Neural Network - Classification

AIM

To implement artificial neural Network for an application in classificaton 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_sample
                    =700, noise=0.05)
X_test, Y_test = make_circles (n_sample=
                    800, noise=0.05)
```

```
sns.scatterplot (x_train [0:,], x_train [:,1]
                 hue = y_train )
plt.title ("Train Data")
plt.show()
clf = MLFClassifier (max_iter = 1000)
clf.fit (x_train, y_train)
Print ({clf score (x_tran, y_train)} ")
print ({clf.score ( x_test, y_test)}")
y_pred = clf.predic (x_test)
fig, axc = plt.predict (x test)
axc[1].title.set_test ("predicted")
axc[0].title.set_test ("Test data")
plt.show()
```

Result

Thus program of Artificial Neural Network in classification has ben Sucessfully executed