Exp 6 Implementing Artificial Neural Network for an application using Python - Classification.

Aim:

To implementing artificial neural networks for an application in classification using python

Code

```
from sklearn.datasets import make_circles
from sklearn.neural_network import MLPClassifier
import 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_samples=300, noise=0.03)

sns.scatterplot(X_train[:,0], X_train[:,1], hue=y_train);

plt.title("Train Data")
plt.show()
clf = MLPClassifier(max_iter=10000)
clf.fit(X_train, y_train)
y_pred = clf.predict(X_test)
fig, ax = plt.subplot(1,2)
sns.scatterplot(X_test[:,0]
```

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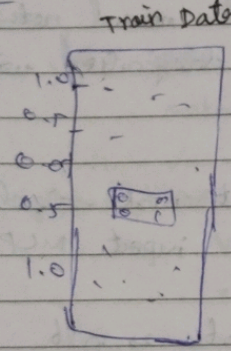
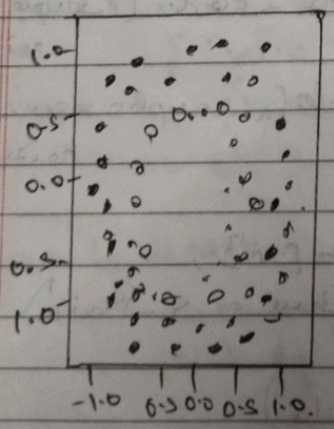
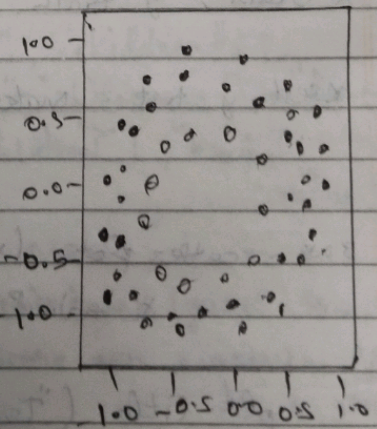
x_test[:, 1], true = y_pred, cx = ax(0))
plt.show()
```

o/p







Result

The program was successfully executed and the o/p is verified.