

Exp: 10

Implementing artificial neural networks for an application using Python - Classification.

Code:

```
from 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 = 100, 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()
ml = MLPClassifier(max_iter = 1000)
ml.fit(X_train, Y_train)
```

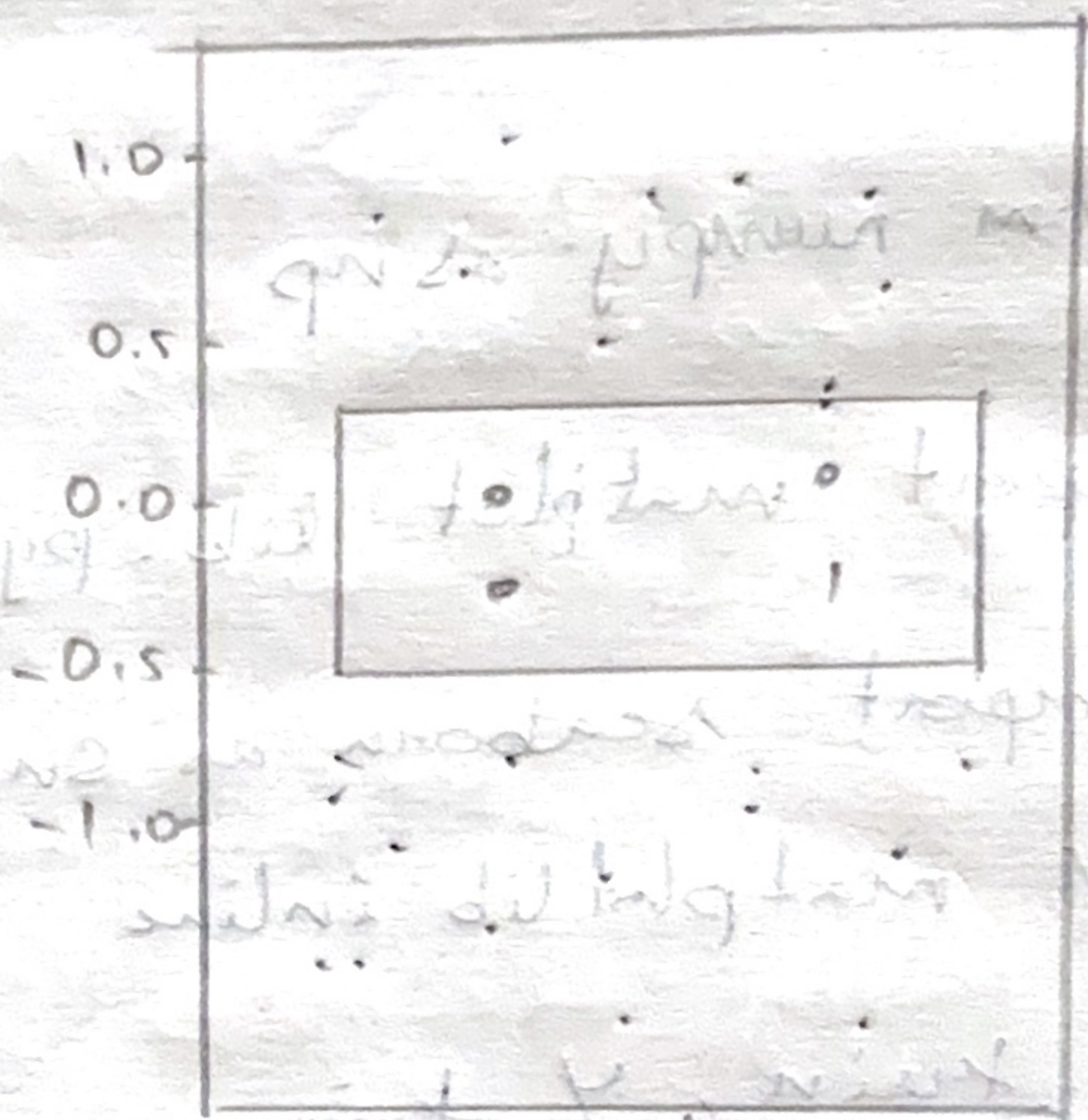
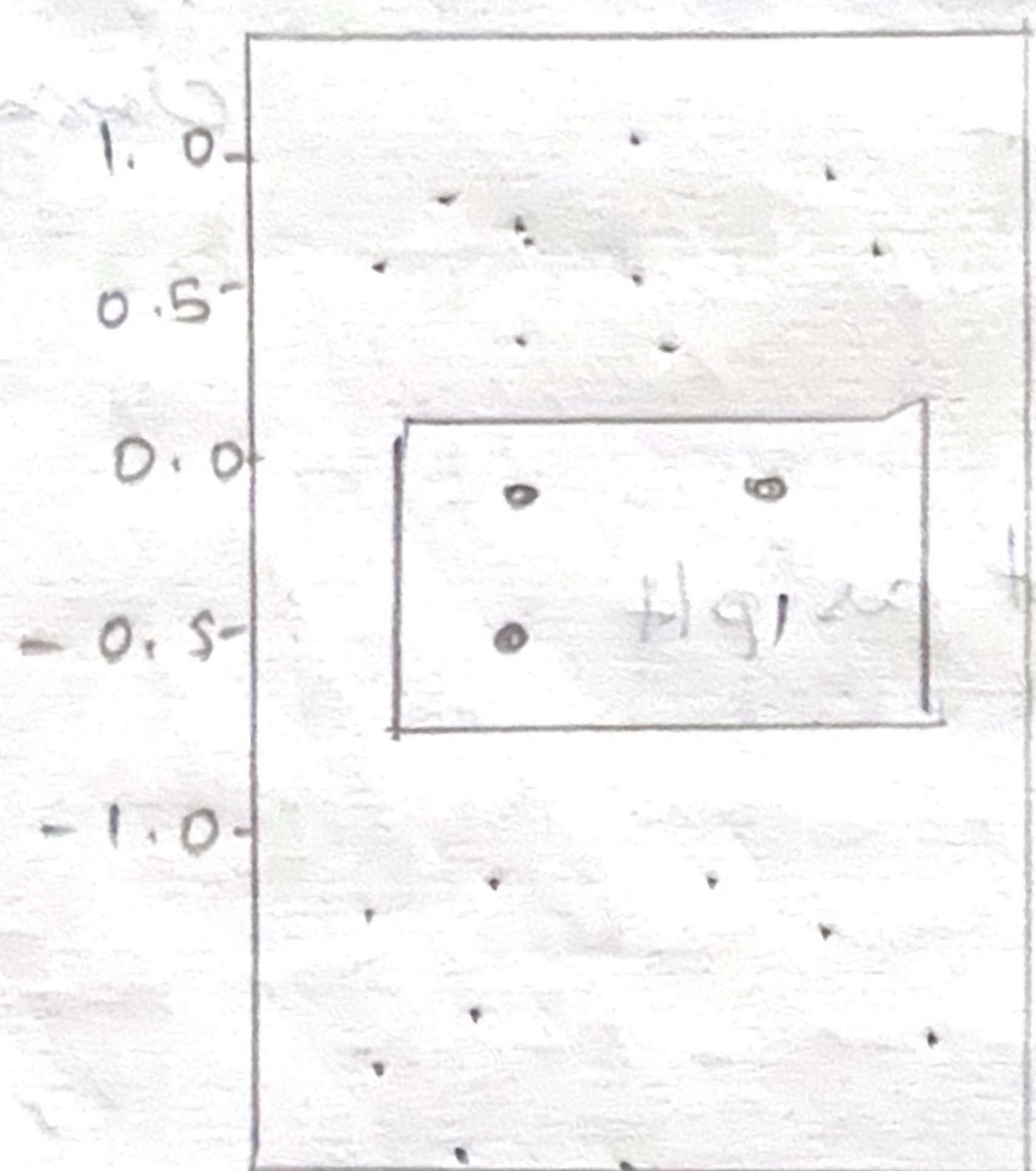

y_pred = jf.predict(x_test)

fig, ax = plt.subplots(1, 2)

sns.scatterplot(x_test[:, 0],

x_test[:, 1], true, y_pred, ax=ax[0],

plt.show())



Result:

The program was successfully executed
and o/p is verified