Ex no: 11

Implementing artificial neural networks for an application using python - Regression

Aim

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

Code

```
from sklearn.neural_network import MLPregressor from sklearn.model_selection import train_test_split from sklearn.datasets import make_regression

import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
%matplotlib inline

x, y = make_regression (n_samples =1000, noise = 0.05, n_features =100)

x.shape , y.shape = ((1000, 100); (1000,))

x_train , x_test , y_train , y_test = train_test_split (x, y, test_size =0.2 , shuffle = True, random_state =42)
```

```
if = MLPRegressor (max_iter = 1000)
if.fit (x_train, y_train)
```

O/P

R_2 Score for test Data = 0.9686558428252

Result

The program was successfully executed and O/P is verified