

# Exp. 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 MLP  
regressor 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); (1000,1))
```

```
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<sub>2</sub> score for test Data = 0.968655842152

Result:

The program is successfully executed and

O/P is verified.