Machine Learning

Lab Experiment -2

**Implement Classification using Multilayer Perceptron**

Code:

from sklearn.datasets import load\_breast\_cancer

from sklearn.model\_selection import train\_test\_split

from sklearn.preprocessing import StandardScaler

from sklearn.metrics import classification\_report,confusion\_matrix

from sklearn.neural\_network import MLPClassifier

cancer = load\_breast\_cancer()

cancer.keys()

cancer['data'].shape

X = cancer['data']

y = cancer['target']

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y)

scaler = StandardScaler()

scaler.fit(X\_train)

X\_train = scaler.transform(X\_train)

X\_test = scaler.transform(X\_test)

mlp = MLPClassifier(hidden\_layer\_sizes=(30,30,30))

mlp.fit(X\_train,y\_train)

predictions = mlp.predict(X\_test)

print(confusion\_matrix(y\_test,predictions))

print(classification\_report(y\_test,predictions))

Output:

