CS 4267

Assignment 2. Due 03/07/2024. 100 points

1)

Use sklearn inbuilt datasets: from
sklearn import datasets

```
from sklearn.datasets import load_breast_cancer
>>> data = load_breast_cancer()
>>> list(data.target_names)
['malignant', 'benign']
```

Purpose

Learn how logistic regression and Neural network works.

Goals

Develop established prediction-based algorithm **from scratch** using python programming language. Use learning rate 0.05

Description

1) A. Write a Logistic regression algorithm to classify the given dataset with a split of 70% training and 30% testing. Output the classification accuracy.

2) **B**. Write a Feedforward Neural Network from scratch with 1 hidden layer of four neurons algorithm to classify the given dataset with a split of 70% training and 30% testing. Output the classification accuracy.

Deliverables

The following additional comments apply:
Good programming style must be observed.
Your source code may be runnable using Google colab (free cloud-based web service).
Using python libraries for data arrays, splits and matrices manipulations is fine.

Students should work **independently**. Each student is responsible for handing in an original program.