

Assignment 7

Date: 23 June 2021

Aim of the Assignment

- The aim of this assignment is to do practice on what you have learned in the lectures.
- In this assignment you shall classify *Spiral* datasets using Artificial Neural Network. You shall present and explain your code in an oral examination.

A1: Classification of Spiral dataset in *Scikit-learn* (Python)

- Classify the Spiral dataset using the algorithm Artificial Neural Network. Following content should be included in your model
 - Multilayer Perceptron
 - Activation and loss function
 - Gradient Descent
 - Backpropagation
- Write your code and results in report form.
- Classify each dataset using either cross-validation or train-test split.
- Each result shall be presented with accuracy score.
- **Note: You are not allowed to use libraries.**

Dataset

Dataset	Format	Description
Spiral	CSV	The standard spiral dataset CSV formats Download link: https://www.lancaster.ac.uk/pg/hyder/Downloads/downloads.html

Here are some useful guides to get you started:

Scikit-learn:

- [Your First Machine Learning Project in Python Step-By-Step](#)
- [A Neural Network Playground](#)

Due Date:1 July 2021 11:59 PM