Neural Networks Project – 1

Weather Prediction

Due by November 17, 2021

Given weather in Szeged 2006-2016 Develop a Python program that detects the humidity using ADALINE.

The online data set of weather in Szeged 2006-2016 that will be used for your project is available at project folder on **blackboard** with file named Weather in Szeged 2006-2016.rar or online in the following website:

https://www.kaggle.com/budincsevity/szeged-weather?select=weatherHistory.csv

Follow the following tasks during the development process of the ADALINE:

(i)   Randomly set the weights' values.
(ii)   Update the weights using batch learning algorithm, using 50 epochs of training on the training set (70 % of the dataset). After each epoch, compute the MSE error on the test set (30% of the dataset). Then draw a chart with a horizontal axis titled "Epoch number" ranging from 1 to 50, and a vertical axis titled "MSE".
(iii)   Give your comments on the resulting graph.

Best wishes ☺