Week6: CS 6301 - Machine Learning Lab

Date: 18.04.22

Instructions:

1. For exercises and spot write the results obtained, plots and inferences (what do u understand from the results).

3. Write ur own functions (instead of packages) for the algorithms to get full mark.

1. Implementation and study of Radial Basis Function (RBF) Network - (7)

A manufacturing company has collected a large amount of data in the form of pairs of real valued input and output vectors, and wants you to build a system that will predict the outputs for new inputs. Design an appropriate Radial Basis Function (RBF) network for them. Explain what will be computed at each network layer.

Describe how you would determine the weights/parameters for such a network and print the weights/ parameters?

2. Comparison of performance with MLP - (3)

Compare the performance of Radial Basis Function (RBF) network with Multilayer Perceptron (MLP) network designed for the same task?

Link to data

Use train.csv and test.csv in the following link.

https://github.com/eugeniashurko/rbfnnpy/tree/master/examples

3. Implementation of XOR gate? (5)

Demonstrate the capability of an RBF network to model XOR logic gate. Generate the performance curves for these RBF models as the inputs vay continuously from 0.0 to 1.0?