**Assignment on Self Organizing Neural Network**

Consider a Kohonen network with 100 neurons arranged in the form of a two-dimensional lattice with 10 rows and 10 columns .

The network is required to classify two-dimensional input vectors such that each neuron in the network should respond only to the input vectors occurring in its region.

Train the network with 1500 two-dimensional input vectors generated randomly in a square region in the interval between -1 and +1. Select initial synaptic weights randomly in the same interval (-1 and +1 )and take learning rate parameter α is equal to 0.1.

Test the performance of the self organizing neurons using the following

Input vectors:

X1=[0.1 0.8]T, X2=[0.5 -0.2]T, X3=[-0.8 -0.9]T, X4=[-0.0.6 0.9]T.

Date : 03-04-2020

Date of submission : Within 12 days from the assigned date.