Report On Self Organizing Neural Network(Kohonen Network)

- Ratnesh Kumar Rai (MIT2019098)

Dataset:

- We generated 1500x2 random uniform data between -1 to 1.
- We initialised 100 (1x2) with uniform random weights between -1 to 1

Training:

- We updated the weights with delta weight and stored the associated node index (min^m distance between x and weight)
- For checking convergence, we used a change _counter which is incremented if associated index is modified, if change_counter <=1 then we stopped training

Observation:

- We observed that, after 10 epoch the weight index is was not getting modified significantly i.e. in 10 epochs our training was completed
- While testing we got the associated node, with the given testing data:
  - [0.1 0.8] : 46
  - [0.5 0.2] : 77
  - [-0.8 -0.9] : 94
  - [-0.06 0.9] : 44