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Self organizing maps. A visualization technique with data dimension reduction.

Tuesday, 25 February 2014 16:00 (1 hour)

In this lecture, the general concepts of self-organizing maps and its properties will be explained. Starting from the classic neural network approach, a MLP (introduced in the previous lecture), the concept of SOM will be explained. Its structure, the learning process and the later classification of the inputs for not seen cases. The main features of the maps: dimensional reduction and the conservation of the topological properties of the inputs, will be highlighted. Also, a small example will be shown where the attendants will see an actual map arranging itself and the resultant order will be interpreted. Finally, some other SOM based models will be shown to point out different architectures and possibilities.

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