

Brief Introduction to Complex Networks and Machine Learning: a physicist viewpoint

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In the first part of this lecture, I will introduce the notations, ideas and basic tools in complex networks. Some research topics including the problem of network inference will also be discussed. In the second part, I will introduce (i) the concept of unsupervised machine learning using PCA as an example, and (ii) supervised learning illustrated with the restricted Boltzmann machine. Simple demonstrations will be performed in the lecture.