

Nonlinear Dimensionality Reduction - Myths, Dogmas and Problems

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Abstract. The purpose of this talk is to give a gentle (and mathematical!) introduction into a family of dimensionality reduction algorithms that have become very popular (including t-SNE, UMAP and others). We'll survey some of the underlying ideas, what we know and what we don't know. There'll be a fair number of open problems, the theory is in its infancy.