

Clustering on Manifolds

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Abstract: *The geometry of a given space characterizes the proximity between data and plays a key role in machine learning. The traditional methods of simply and naively treating data spaces as "flat" Euclidean's may not offer desired effect in variety of learning tasks. In this talk, I would like to report some of my recent research on clustering tasks over manifolds and try to give an introduction to the state-of-the-art learning on manifolds. The focus will be on the low-rank representation (LRR) models on the Grassmann manifold and the curves manifold used in learning tasks from computer vision and time series..*

Keywords: *Machine Learning, Low-Rank Representation and Grassmann manifold.*