

List of Manifold Learning Methods

Seungjin Choi

Department of Computer Science
POSTECH, Korea
seungjin@postech.ac.kr

- [Maximum variance unfolding](#): See Kilian Weinberger's.
- [Hessian eigenmap](#): D. L. Donoho and C. Grimes, "Hessian eigenmaps: new locally linear embedding techniques for high dimensional data," Proceedings of the National Academy of Sciences, vol. 100, pp. 5591-5596, 2003.
- [Manifold charting](#): M. Brand, "Charting a manifold," NIPS-2002.
- [Local tangent space alignment](#): Z. Zhang and H. Zha, "Principal manifolds and nonlinear dimensionality reduction via tangent space alignment," SIAM J. Sci. Comput., vol. 26, no. 1, pp. 313-338, 2004.
- [Stochastic neighbor embedding](#): G. Hinton and S. Roweis, "Stochastic Neighbor Embedding," NIPS-2002.
- [Adaptive manifold learning](#): J. Wang, Z. Zhang, and H. Zha, "Adaptive manifold learning," NIPS-2004.

- **Alignment of local representations:** E. Teh and S. Roweis, "Automatic alignment of local representations," NIPS-2002.
- **Euclidean embedding:** A. Globerson, G. Chechik, F. Pereira, and N. Tishby, "Euclidean Embedding of Co-occurrence Data," NIPS-2004.
- **Generalized non-metric MDS:** S. Agarwal, "Generalized non-metric multidimensional scaling," AISTATS-2007.
- **Neighbourhood components analysis:** J. Goldberger, S. Roweis, G. Hinton, and R. Salakhutdinov, "Neighbourhood components analysis," NIPS-2004.
- **Geodesic entropic graphs:** J. A. Costa and A. O. Hero. "Geodesic entropic graphs for dimension and entropy estimation in manifold learning," IEEE Trans. Signal Processing, vol. 52, pp. 2210-2221, 2004.
- **Incremental manifold learning:** M.H.C. Law and A.K. Jain, "Incremental nonlinear dimensionality reduction by manifold learning," IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 28, pp. 377-391, 2006.