Regularizers versus Losses for Nonlinear Dimensionality Reduction

Yaoliang Yu, James Neufeld, Ryan Kiros, Xinhua Zhang, Dale Schuurmans
Department of Computing Science, University of Alberta, Edmonton, AB T6G 2E8 Canada

Supplementary Material

Swiss Roll and Face data sets. These two data sets were obtained from http://isomap.stanford.edu/datasets.html; citation:


Some example images are shown in Figures 1 and 2.

3d-Sin Wave data set. This data set, illustrated in Figure 3, is based on the helix dataset in the drtoolbox toolbox:


Brush data set. This data set is illustrated in Figure 4.
Figure 1. Swiss roll dataset from http://isomap.stanford.edu/datasets.html. The data set size was reduced by including only every 10th data point.

Figure 2. Faces dataset from http://isomap.stanford.edu/datasets.html.
Figure 3. 3d sin wave dataset
Figure 1. Brush dataset

Figure 4. Brush dataset