Abstract

Recent technological advances and availability of computing resources resulted in a massive growth of data size, dimensions and complexity. Data visualization is a good approach when dealing with large scale high dimensional datasets as it will provide the opportunity to understand what's in the data and where to focus. However, the ever increasing dimensions of datasets, the physical limitations of the display screen (2D/3D), and the relatively small capacity of our mind to process complex data at a time pose a challenge in the process of visualization. This paper describe the advancements made so far in visualizing high dimensional data and the challenges that should be addressed in future researches.

References

1. Agnes Vathy-Fogarassy and Janos Abonyi. 2013. Graph Based Clustering and Data Visualization Algorithms, Springer.
2. Anna Maria K. and Janos Abonyi. Visualization of Fuzzy Clustering Results by Modified
Sammon Mapping. University of Veszprem

15. Lidongwang, Guanghuiwang, and Cheryl Ann Alexander. 2015. Big Data Visualization: Methods, Challenges, and Technology Progress
22. S. Lui, D. Maljovich, B. Wang, P.-T. Bremer and V. Pascucci. Visualizing High dimensional data: Advances in the past decade

Index Terms

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Keywords

Big Data, Data Visualization, Dimension Reduction, PCA, Sammon’s Mapping, and MDS