Tittle: Explore NIPS papers dataset

Summary

This work explores the relationship between reduced features and time in NIPS dataset. For part one, the authors use the PCA and MDS to reduce high dimension and also compare the integrated methods and individual methods. For part two, they construct the connection matrix to demonstrate the shared authors, and then apply manifold learning to show their result.

Strengths

This report clearly shows its data configuration, and also deeply analyses the results by comparing different approaches. Of note, this report considers the practical background, therefore, in the analysis process, more valuable conclusions are obtained.

Drawbacks

Some methods don’ t have unclear description or the purpose of using this method is unclear.

Evaluation on Clarity and quality of writing (grade: 4)

This article reflects good English expression and strong logic. But some errors are listed below .

1. On line 11 of abstract part, the authors mention that “We visualize the clustering results respectively into 2D and 3D space” , but in the paper, there is not any 3D result.
2. For line 37, “PCA seeks the most accurate data representation in a lower dimensional space” . Please provide the evidence or cite the reference to verify this sentence.
3. For line 45, “LLE is motivated by the idea that global information about geodesic distance might not be accurate while requires expensive computational cost” , try to highlight the local linearity.
4. For reference part, the authors provide citations at the end of the report, but the specific positions of citations cannot be found. Try to add them.

Evaluation on Technical Quality (grade: 5):

The paper utilizes several approaches to achieve their intention.
However, some important interpretations are missing.

Why do you use K nearest neighbor graph? Please add the significance or intention in your report. Why not directly using the original matrix? After K nearest neighbor graph, how to understand your transformed matrix and also the axis title in Figure 12 need to be added.

Overall rating: 4.5
Confidence on your assessment: 3