1. Group 2 - Image Inpainting with PCA

Summary

This project has adopted three damage patterns to raw digits and attempted to use PCA to fill in the missing parts of images.

Strength:

The strength of this project is the abundant approaches to construct images models and clear illustrations on the methodology, and experiment's results.

Weakness:

However, there are some visual improvements that may be considered to achieve, which are the blurred pictures and words, as there are some blanks within the words like follows:

The results of inpainting
Figures 5, 6, and 7, respe
first column shows the r
the original image, and tl
samples shown are rand
Due to the concentrati
written digits, the inforn
to figure 7. Despite this

• Evaluation on Clarity and quality of writing (1-5): 3

The expressions are good, but the quality of the poster could be improved.

• Evaluation on Technical Quality (1-5): 4

Abundant comparison between various images.

• Overall rating: 4

• Confidence on your assessment (1-3): 2

2. Group 6 - Explore and Play with SNPs Data for Fun

Summary:

This article has explored several approaches including PCA, MDS, kernel-PCA, and random techniques with SNP to present the performance of human migrations and make comparison between approaches.

Strength:

Excellent report with clear problem statement and visual representation of results.

Weakness:

Methodologies with the detailed statement of how to apply several methods in the algorithm might worth more demonstration.


• Evaluation on Clarity and quality of writing (1-5): 4

Initial setting of the experiments and a short description of the dataset could be adopted in the report.


• Evaluation on Technical Quality (1-5): 5

Reasonable codes for the visualization of the relationship of human migrations.


• Overall rating: 4.5


• Confidence on your assessment (1-3): 2

3. Group 7 - Human Migration History: A Single Nucleotide Polymorphisms Perspective

Summary:

This article has applied PCA to high-dimensional SNPs data and compared the MDS and t-SNE in the context of clustering results under African origin hypothesis of human migration data.

Strength:

Excellent report with impressive and clear methodologies theoretical illustrations. Furthermore, the data description section makes the content and also structure of the report very complete.

Weakness:

Better to add more relevant references to strongly support the demonstration.

• Evaluation on Clarity and quality of writing (1-5): 4

Clear illustration on the theoretical background and algorithms of the report.

• Evaluation on Technical Quality (1-5): 5

Reasonable codes for the visualization of the separation clustering of human migrants.

• Overall rating: 5

• Confidence on your assessment (1-3): 2

4. Group 17 - Exploration of PCA family for handwritten digit classification

Summary:

Comparison between various PCA approaches including original PCA, kernel PCA, and sparse PCA have been explored in this report in the context of classification of handwritten digit.

Strength:

The theoretical illustration of algorithms, comparison between experiments results, and visualization of numerical results are impressive.

Weakness:

However, an improvement of article structure should be considered as the data description part in the front seems a little bit massive. The very detailed description of images could be moved to the experiment section.

- Evaluation on Clarity and quality of writing (1-5): 4

The reference citation format seems not the correct APA form.

- Evaluation on Technical Quality (1-5): 5

Reasonable codes for the visualization of the digit classification.

- Overall rating: 4.5

- Confidence on your assessment (1-3): 2

5.  Group 18 – Exploring the Effectiveness of PCA on Handwritten Digit Dataset

Summary:

Comparison between various PCA approaches including original PCA, kernel PCA, and sparse PCA have been explored in this report in the context of classification of handwritten digit.

Strength:

Very clear demonstration of the problem, and the conduction of experiment.

Weakness:

Lack of the illustration on theoretical background. Description of the PCA and algorithms should be introduced to the methodology section. And also lack of a reference section.

- Evaluation on Clarity and quality of writing (1-5): 3

A reference section and a methodology section illustration algorithm should be contained in the report.

- Evaluation on Technical Quality (1-5): 4

The design of the code may be better if it is a little bit richer, such as comparing the performance of different PCA methods in terms of reconstruction error.

- Overall rating: 4

- Confidence on your assessment (1-3): 2