

Review for Deep Learning Project 1 - Group 09

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1 Summary of the Report

This report illustrates the feature extraction on MNIST dataset by scattering net and pre-trained VGG19 and RESNET50 accordingly. Then PCA and t-SNE have been performed for visualizing those extracted features. Finally, supervised learning such as Logistic Regression, Random Forest, LDA and SVM have been performed to compare the prediction results with raw hand-written image. They also did some research on Raphael's paintings dataset.

2 Strengths of the Report

- There are more than one methods used and compared in both unsupervised learning and supervised learning sections.
- Features illustration is great to look at by coloring different category in different colors, while there is no stated labels;
- The report is well-organized, with an introduction of either data or method used;
- Formatting is good and references are appropriate

3 Weaknesses of the Report

I think this report is great and I did not find any weakness.

4 Clarity and Quality of Writing(1-5): 5

The report is clearly written, and there are figures to illustrate the unsupervised learning results. Formatting and structure are great. And results have been clearly explained and discussed with examples. All comparisons are clearly illustrated by tables. References are appropriate. I have no suggestion in this part.

5 Technical Quality(1-5):5

The techniques used in this report is sound and well-explained. Every item including data and method is introduced before use. There seems no flaws in reasoning and claims are supported by experiment results. The results is convincing as there is comparison between several unsupervised learning methods. I have no suggestion in this part.

6 Overall Rating(1-5):5

7 Confidence on the assessment(1-3):3