Comment 7

In paper 7, the author extracts the feature of images on MNIST dataset and Raphael’s paintings dataset by scattering net and pre-trained deep neural network VGG19 respectively. Then they used different unsupervised learning methods such as PCA/MDS, Manifold learning (Diffusion Map, ISOMAP, LLE) and t-SNE to visualize the feature vectors extracted from Raphael’s painting dataset. Finally, supervised learning methods such as SVM are used to achieve the image classification in Raphael’s paintings and MNIST dataset.

Eventually, SVM yields an accuracy of 0.963 on MNIST dataset based on extracted features, and accuracy of 0.913 based on original dataset. For another dataset, the model provides prediction of the disputed pictures.

Strength: The strength of this paper is that the author used manifold learning in this project, which is reasonable for this dataset.

Weakness: The weakness of this paper is that the SVM is probably not the most suitable algorithm of this task.

Evaluation on quality of writing: 4.

Evaluation on presentation: 4. The paper is well organized and clear.

Evaluation on creativity: 3.

Confidence on your assessment: 2