Summary

The report discuss feature extraction on the MNIST as well as the Raphael painting data sets. For MNIST wavelet scattering is used to learn features together with logistic regression for prediction. For the Raphael dataset transfer learning using VGG19 is used to learn features together with logistic regression for classification. The features are visualized using T-SNE, PCA as well as manifold learning.

Assessment

Strengths

- The visualizations are informative

- The presentation is comprehensible

- Relevant algorithms are used

Weaknesses

- The report could benefit by explaining the algorithms and the context in greater detail, including references

- The report could also benefit from a more elaborated discussion

- The project code could be included for reproducibility

Quality of writing: 3

The writing is clear and no language errors were found. The report could benefit from having an introduction part introducing the context and the used algorithms and a conclusion in the end. Also references to relevant articles could be included.

Technical quality: 4

The methods are relevant to the problems, but more work could be put in to explaining the choice of algorithms for the studied problems. Here references to related work could be included. Also, the performance could be compared with the performance of an supervised learning algorithm using the raw data.

Overall rating: 4

Confidence of peer review: 3