

Review on Group 9

Summary

Report format was adopted by group 9 to complete the first project. In this report, both scattering net and pre-trained deep neural network VGG19 and ResNet 50 were applied on MNIST dataset to extract features. Supervised learning methods logistic regression, random forest, LDA and SVM were used to classify the images. Comparison between the performances of the classifier before and after feature extraction was conducted. GTF+OD and GTF+NN were used to identify the disputed paintings and the result of GTF+ODD is all disputed paintings are forgery, while GTF+NN predicts the first and 26th paintings belong to Raphael.

Strengths

Both scattering net and pretrained deep neural networks were used to extract features of MINIST and Raphael's painting datasets. Data augmentation was tried in this report. Unsupervised learning methods were applied to visualize the extracted features of MINIST dataset. The objective and the logic of this report is quite clear. Comparison between different combinates was made and a simple conclusion was drawn. Leave-one-out cross validation was conducted in this report.

Weaknesses

No unsupervised learning methods were applied to visualize extracted features of Raphael's painting dataset.

Clarity and quality of writing

5

The report is clearly written. It is well organized with good examples and proper figures. No obvious grammar problems or typos are found.

Technical quality

4

Overall rating

4

Confidence on my assessment

2

