

Summary: Group14 applied the scattering net and ResNet-18 to extract features of Raphael images. Based on these features they used traditional supervised learning methods SVM to classify the images. Results show the ResNet-18+SVM combination achieved a relatively high accuracy of 94.76% while the ScatNet+SVM combination reached only 76.39% accuracy. So they updated the latter combination by replacing SVM with a small CNN with 3x3 convs based on VGG and saw a much better result (98.14%).

Strengths: Clear structures, complete reasoning and ability to analyze results and provide proof.

Weaknesses: No

Clarity and equality of writing: Overall the report gets written and organized very well except for minor typos. Last sentence in first paragraph of “Discussion” is lack of a verb and second paragraph of “Conclusion” where “I First” should be “I first”.

Technical quality: Group 14 have completed the project as required with trying on the asterisk task. My question is PCA is not friendly to topology structures so why not try any other methods to reduce dimensionality? Another one is that in the 10 classes’ features extracted by the two methods, is visualizing on only 3 labels too results-oriented and only in order to explain the classification results?

Overall rating: 4

Confidence on assessment: 3