Summary: Group12 applied the scattering net to extract features of MNIST images. Based on these features they used traditional supervised learning methods LDA, SVM, Random Forest to classify the images. They also tested neural networks VGG19 and Resnet on raw MNIST dataset and went to conclusion that the combination of Scattering Net and traditional machine learning methods can achieve performance as good as deep learning methods.

Strengths: Clear structure and analysis of experimental results. They added a point that was not required in the project, which is to use the results of the original MNIST data on VGG and Resnet to prove their conclusion.

Weaknesses: There may be too many explanations about the principles of the algorithms especially for Resnet.

Clarity and equality of writing: Overall the report gets written clearly. However, since scattering net is placed under the heading of "Feature Extraction", PCA and t-SNE are placed under "Visualization", why are VGG and Resnet listed separately as headings?

Technical quality: Group 12 have completed the project as required with trying on the asterisk task. But they seem to ignore doing feature extraction with pre-trained models.

Overall rating: 4

Confidence on assessment: 3