Assignment-1

EE5103 -Deep Learning for Computer Vision

NN classification on CIFAR-10 dataset

Date Given: 20-08-2018 **To be Submitted by: 03-09-2018**

- The CIFAR-10 dataset consists of 60000 32x32 color images spanning 10 classes, with 6000 images per class. There are 50000 training images and 10000 test images.
- The link to download this dataset is given below.
  https://www.cs.toronto.edu/~kriz/cifar.html
- Obtain any hand-crafted features (e.g., Histogram, Histogram of gradient (HOG) or Image based features) for the data samples (images).
- Use any similarity or dissimilarity measure to find the Nearest Neighbours.
- Apply K-Nearest Neighbour classifier algorithm for different values of K for the test dataset.
- Quantify the k-NN classifier accuracy over the test data for different values of k, you have considered and for the different features and the distance/ similarity measures.
- Visualize the NN classification using any projection method in 2 Dimensions using either PCA or T-SNE (you may use your old code or internet based coding for the same).
- Summarize your approach, results and inferences in a report and submit along with your annotated code not later than 3-09-2018.