

Pattern Recognition

ECE 4363 / ECE 5363

Project 4

1. Use SVM to classify the following two datasets.
 - a. MNIST handwritten digits: <http://yann.lecun.com/exdb/mnist/>
 - b. C. elegans images: [OneDrive](#)
2. Write a brief report with the following content.
 - a. Identify source of SVM implementation
 - b. At a minimum, include the following information on both experiments:
 - i. Input image size
 - ii. Number of classes and total number of images in each class
 - iii. Training set and test set sizes
 - iv. Training hyperparameters
 - c. Report classifier performance including training and test errors
 - d. Report Training and testing times
3. Investigate and report the impact of incorporating PCA for dimensionality reduction of input data on one of the two experiments.
4. Make one submission per group.

Archive

- **.m or .py file(s)**
 - **report in pdf format**
 - **training and test set images for the C. elegans dataset**
- and upload to Blackboard prior to the deadline.**