

Machine Learning

ECE 4332 / ECE 5332

Project 4

1. Use your implementation of the logistic regression approach 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 that includes
 - a. Validation procedure for your implementation
 - b. Following information on both datasets
 - 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 set parameters, including optimizer and corresponding parameters (learning rate, momentum, etc.), batch size, number of epochs, etc.
 - c. Systematic evaluation of performance of trained network that includes training and test errors
 - d. Training and testing times
3. This is a group project. No fewer than three and no more than four students are to form a group and make a single submission.

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.**