

Assignment-4

CE793: Deep Learning for Engineers

Due date 10/12/2020 (Monday) – before class

Total points: 40 points

Instructions:

- 1) All assignments should be submitted to get a passing grade
- 2) Teamwork is encouraged.
- 3) All assignments should be submitted to get a passing grade
- 4) Use Matlab or any other programming language for this assignment
- 5) Please do not ask me to debug your codes. I will be more than happy to take you through the algorithms once again if needed

1) Write code to classify the data provided in Perceptron.xlsx using perceptron rule.

Deliverable: Use the trained classifier to classify $d_k = \{i, j\}$, where d_k is the k^{th} observation/ data point, $i, j = \{1, 2, 3 \dots 100\}$ and $k = 1 \dots 10,000$ and highlight the decision surface. (20 points)

Note: All the students who took Machine Learning course will use algorithm-2 and use the dataset Perceptron_alg2.xlsx.

2) Write code to classify the multi-target variables data provided in Perceptron_2C.xlsx using perceptron rule. Provide the confusion matrix, # epochs, Learning rate (if applicable), plot the predicted classes in different colors. (20 points)