## **Assignment-8**

## **CE793: Machine Learning for Engineers**

## **Due date 11/23/2020 (Monday)**

Total points: 100 points

## **Instructions:**

- 1) All assignments should be submitted to get a passing grade
- 2) Teamwork is encouraged.
- 3) Late submission will result in a 20% penalty.
- 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 a code for nonlinear Autoencoder with two hidden layers (2 neurons in each hidden layer) and use this to find the hidden representation of the data provided in Auto\_encoder.xlsx and Auto\_encoder\_nonlinear\_1\_var.xlsx. (100 points)

Deliverable: code and  $h_1$ ,  $h_2$  values for both the datasets