

## Assignment-6

### CE793: Machine Learning for Engineers

**Due date 11/2/2020 (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) Modify the MLP code discussed in the class to convert the 1<sup>st</sup> hidden layer into nonlinear neurons (choose activation function  $y = \frac{1}{1+\exp(-z)}$ ), where  $z$  is the linear net input function/value from each neuron.

Deliverable-1: Provide the architecture of the neural network with the names of the variables (weights and biases of neurons) used in the code (20 points)

Deliverable-2: Plot the predicted values versus training data values for data\_data.xlsx. (60 points)

Deliverable-3: Attach the code (20 points)