

II Semester ME (Big Data Analytics)

BDA 5251 Machine Learning for Big Data

Lab Assignment

Q. No.	Question	BTL-CO-PO
1	Demonstrate the following a. logical AND, logical OR functions by McCulloch-Pitts neuron model. b. EM clustering	3-1-3
2	Experiment the following a. Single layer NN - AND, OR, NOT, NAND, and NOR perceptron b. Multilayer - Back propagation NN	4-2-4
3	Compare the performance in finding the optimal number of clusters using a. Elbow method. b. Silhouette method. c. Gap statistic method	4-3-4
4	Evaluate the performance of the following machine learning models a. Backpropagation neural network: Consider your own dataset Apply hyper parameter tuning to improve the accuracy with balanced performance in terms of time taken for execution b. K-means clustering machine learning technique in python for the given datasets. a. Find the optimal number of clusters. b. Visualize the clusters. c. Hierarchical clustering machine learning approach in python for the given datasets. a. Find the optimal number of clusters. b. Visualize the clusters. d. Linear SVM for the given data sets	5-4-5

Course coordinator

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