Certificate/ Diploma Course in Artificial Intelligence and Data Science
Semester II
DAD-1-05P: Machine Learning Lab

Total Marks: 100
External Marks: 70
Internal Marks: 30
Credits: 2
Pass Percentage: 40%

Besides below given assignment List of Lab Assignments – Session wise will be given to student

1)   Write a program to demonstrate the working of decision tree based ID3 algorithm. Use an appropriate data set for building the decision tree and apply this knowledge to classify a new sample.

2)   Build an Artificial Neural Network by implementing the back propagation algorithm and test the same using appropriate data set.

3)   Write a program to implement naïve Bayesian classifier for a sample training data set stored as a .CSV file. Compute the accuracy of the classifier, considering few test data sets.

4)   Write a program to construct a Bayesian network considering any medical related dataset at UCI.

5)   Apply EM algorithm to cluster a set of data stored in a .CSV file. Use the same data set for clustering using k-means algorithm. Compare the results of these two algorithms and comment the quality of clustering.

6)   Write a program (using Python ML library classes) to implement k-Nearest Neighbor algorithm to classify the iris data set. Print both the correct and wrong predictions.

7)   Implement the non-parametric Locally weighted regression algorithm in order to fit data points. Select the appropriate data set for your experiment and draw graphs