

B.Sc. (Data Science)
Discipline Specific Course (DSC)
Semester IV
BSDB32403P: 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 backpropagation 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.