

Computer Science [Honours]**[CBCS]****B.Sc. Fifth Semester End Examination-2023****(Regular & Supplementary Paper)****Practical****PAPER-DSE2P****Machine learning Lab****Full Marks: 20****Time: 02 Hrs***The figures in the right hand margin indicate marks**Candidates are required to give their answers in their own words as far as practicable**Illustrate the answers wherever necessary***Answer any one question****1x15= 15**

1. Write a programme to implement the **any classifier** to find the species of a fish from a sample training data set stored as a Fish CSV file. Compute the accuracy of the classifier. **Calculate the confusion matrix, F-1 score also.**
2. Write a programme to implement **the logistic regression and analyzed the dataset to determine the relationship between the Gender, Calculate the confusion matrix and accuracy (Dataset: Social_Network_Ads. CSV)**
3. Write a programme to implement linear Regression to calculate the car price using the CarPrice_Assignment .csv dataset.

4. Build an Artificial Neural Network by implementing the Back propagation algorithm and test the same using appropriate data sets.
5. Write a programme to implement the **native Bayesian classifier** for a sample training dataset stored as a Bayes. CSV file. Compute the accuracy of the classifier
6. Implement Perceptron Algorithm for OR Logic Gate with 2-bit Binary Input
7. Write a programme to implement the **any classifier** on IRIS dataset and compute the accuracy of the classifier. Calculate the confusion matrix, F-1 score also.
8. Write a programme to implement the **any classifier** for a sample training dataset stored as a diabetes CSV file. Compute the accuracy of the classifier.
9. Write a programme to implement the **Regression** for a sample training dataset stored as a sample 1. CSV file. Compute the accuracy and R2 score.
10. Write a program to verify an overfitting situation for a sampler training dataset stored as a **sample2**. CSV file and apply Ridge regularization. Compute the accuracy and R2 score.

Dataset is available at following link:
Ftp:10.0.0.67/dataset/