

Birla Institute of Technology & Science, Pilani
Work-Integrated Learning Programmes Division
Second Semester 2018-2019
Assignment
Machine Learning (IS ZC464)

Date : April 30, 2019

Marks: 10

Date of submission: May 15, 2019

Instructions: Answer all the questions neatly. Answers can be hand written or typed as a word document. The answers must display depth of understanding of the concept. Please convert the document as a single pdf file and upload before the submission deadline.

1. What do you understand by Artificial Neural Networks (ANN)? Explain the use of ANN in classification. [2M]
2. List the following as asked [3M]
 - (a) The three classification algorithms
 - (b) The three issues in machine learning
 - (c) The two types of learning
 - (d) The three data visualization methods
 - (e) The three performance evaluation methods for classification algorithms
 - (f) The three feature extraction algorithms
3. Design a neural network for four class classification problem in which the feature vector size is two. You can assume the data to be linearly separable by two straight lines. Illustrate using an appropriate example. Justify your choice of numbers of input, output and processing neurons. How will you obtain the weights for such neural network? Explain. [3M]
4. Differentiate between the following. Give appropriate examples [2M]
 - (a) Classification and regression
 - (b) Traditional vs. machine learning
