CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY
CHANDUBHAI S. PATEL INSTITUTE OF TECHNOLOGY
U & P U. Patel Department of Computer Engineering

Subject Name : Machine Learning
Subject Code : CE473
Semester : VII
Academic year : 2020-21

Experiment List

Sr. No.	Aim of the Practical	Hrs.	CO	PO	PEO
1	**Numpy** Creating blank array, with predefined data, with pattern specific data Slicing and Updating elements, Shape manipulations - Looping over arrays. Reading files in numpy **pandas** introduction Creating data frame - Reading files Slicing manipulations Exporting data to files Columns and row manipulations with loops **Matplotlib** Importing matplotlib	4	3	1, 6	2,4,5

	Simple line chart Correlation chart Histogram				
2	Implement the linear regression and calculate the different evaluation measure for the same. Also	2	3	1, 6	2,4,5
3	Implement gradient descent for linear regression and observe the cost with above practical.	2	2	1, 6, 7	2,4,5
4	Implement logistic regression and calculate the different evaluation measure for the same. Also implement gradient descent and observe the cost with logistic regression using gradient descent.	4	3	1, 6, 7	2,4,5
5	Task 1: Creating First Artificial Neural Network (ANN) using Keras and Tensor flow. Dataset: Pima – Indian data set Task 2: Improve the performance of Artificial Neural Network.	2	3	1, 6, 7	2,4,5
6	Explore the concept of overfitting and underfitting for the trained models from experiment-3.	2	2	1, 6, 7	2,4,5
7	Implement the 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.	2	3	1, 6, 7	2,4,5
8	Implement Convolution Neural Network (CNN) for classifying images of dogs and cats.	4	3	1, 6, 7	2,4,5
8	Implement Recursive Neural Network (RNN) language model.	2	1	1, 6	2,4,5

9	Perform classification of MNIST dataset in Keras.	4	2	1, 6, 7	2,4,5
10	Implement the data augmentation technique for CNN to improve the result of classification.	2	2	1, 6, 7	2,4,5
	Total Hrs.	**30**			