



BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE (A)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
BR25 M.TECH CSE COURSE STRUCTURE AND SYLLABUS

II Semester	MACHINE LEARNING LAB (D252BA04)	L	T	P	C
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Pre-requisites: Data Base Management Systems, Python Programming

Course Objectives: The main objective of the course is to

- To learn about computing central tendency measures and Data pre-processing techniques
- To learn about classification and regression algorithms
- To apply different clustering algorithms for a problem.

Software's Required: Python/R/Weka

UNIT	CONTENTS	Contact Hours
Experiment-1	Compute Central Tendency Measures: Mean, Median, Mode Measure Of Dispersion: Variance, Standard Deviation.	10Hrs
Experiment-2	Apply the following Pre-processing techniques for a given dataset. a. Attribute selection b. Handling Missing Values c. Discretization d. Elimination of Outliers	12Hrs
Experiment-3	Apply KNN algorithm for classification and regression	12Hrs
Experiment-4	Demonstrate decision tree algorithm for a classification problem and Perform parameter tuning for better results	
Experiment-5	Demonstrate decision tree algorithm for a regression problem	12Hrs
Experiment-6	Apply Random Forest algorithm for classification and regression	12Hrs
Experiment-7	Demonstrate Naïve Bayes Classification algorithm	

Dr.N.Rama Krishnaiah, Professor of CSE,UCEK & Control of Examination JNTUK, Kakinada.	Dr.C.Krishna Mohan, Professor of CSE,IIT, Kandi, Hyderabad.	Dr.P.Radha Krishna, Professor of CWQSE,NI T, Warangal	Mr.Rajesh Bobburi Chief Operating Officer, HighQ Labs Private Limited, Rajahmundry	Dr.Lakshmi Haritha Medida, Associate Professor, R.M.K.Engineering College,Kavarai,pettai,Tamilnadu	Dr.K.Srinivas, Professor & HoD Department of CSE, B.V.C.I.T.S, Batlapalem
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Experiment-8	Apply Support Vector algorithm for classification	
Experiment-9	Demonstrate simple linear regression algorithm for a regression problem	
Experiment-10	Apply Logistic regression algorithm for a classification problem	
Experiment-11	Demonstrate Multi-layer Perceptron algorithm for a classification problem	
Experiment-12	Implement the K-means algorithm and apply it to the data you Selected. Evaluate performance by measuring the sum of the Euclidean distance of each example from its class center. Test the Performance of the algorithm as a function of the parameters K.	
Experiment-13	Demonstrate the use of Fuzzy C-Means Clustering	
Experiment-14	Demonstrate the use of Expectation Maximization based clustering algorithm	
Total		58Hrs

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