

 NIIST BHOPAL		NRI INSTITUTE OF INFORMATION SCIENCE & TECHNOLOGY		FORM NO	NIIST/A/10
		DEPARTMENT NAME: <u>COMPUTER SCIENCE AND ENGINEERING</u>		REV. NO	0
				REV. DT	30/06/2011
BRANCH	CSE	<u>LIST OF EXPERIMENTS</u>			
SEMESTER	VI				
SUBJECT NAME: MACHINE LEARNING				SUBJECT CODE: CS 601	

1	Implement and demonstrate the FIND-S algorithm for finding the most specific hypothesis based on a given set of training data samples. Read the training data from a .CSV file
2	For a given set of training data examples stored in a .CSV file, implement and demonstrate the Candidate-Elimination algorithm to output a description of the set of all hypotheses consistent with the training examples
3	Write a program to demonstrate the working of the decision tree based ID3 algorithm. Use an appropriate data set for building the decision tree and apply this knowledge to classify a new sample.
4	Build an Artificial Neural Network by implementing the Backpropagation algorithm and test the same using appropriate data sets.
5	Write a program to 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.
6	Assuming a set of documents that need to be classified, use the naïve Bayesian Classifier model to perform this task. Built-in Java classes/API can be used to write the program. Calculate the accuracy, precision, and recall for your data set.
7	Write a program to construct a Bayesian network considering medical data. Use this model to demonstrate the diagnosis of heart patients using standard Heart Disease Data Set. You can use Java/Python ML library classes/API.
8	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 on the quality of clustering. You can add Java/Python ML library classes/API in the program.
9	Write a program to implement k-Nearest Neighbour algorithm to classify the iris data set. Print both correct and wrong predictions. Java/Python ML library classes can be used for this problem.
10	Implement the non-parametric Locally Weighted Regression algorithm in order to fit data points. Select appropriate data set for your experiment and draw graphs



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SUBJECT NAME: COMPUTER NETWORK SUBJECT CODE: CS 602					

1	Study of Different Type of LAN& Network Equipments.
2	Study and Verification of standard Network topologies i.e. Star, Bus, Ring etc.
3	LAN installations and Configurations.
4	Write a program to implement various types of error correcting technique
5	Write a program to Implement various types of framing methods.
6	Study of Tool Command Language (TCL).
7	Study and Installation of Standard Network Simulator: N.S-2, N . S 3 . OpNet , QualNetetc .
8	Study & Installation of ONE (Opportunistic Network Environment) Simulator for High Mobility Networks .
9	Configure 802.11 WLAN
10	Implement &Simulate various types of routing algorithm
11	Study & Simulation of MAC Protocols like Aloha, CSMA, CSMA/CD and CSMA/CA using Standard Network Simulators.
12	Study of Application layer protocols-DNS, HTTP, HTTPS, FTP and TelNet.





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LIST OF EXPERIMENTS

SUBJECT NAME: DATA ANALYTIC LAB

SUBJECT CODE: CS 605

1	To learn the basic of data analytic framework.
2	To learn the Bayes' theorem.
3	To learn the regression in python.
4	To learn the introduction of R programming.
5	To learn the control flow statement in R.
6	To learn the R program to find the factorial of a no.
7	To learn the R program to check armstrong no.
8	To learn the introduction of MATLAB.
9	To learn the basic math operations.
10	To learn the add two no.by using MATLAB.





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BRANCH

CSE

SEMESTER

VI

SUBJECT NAME: SKILL DEVELOPMENT LAB

SUBJECT CODE: CS 606

1	Study of Life cycle of a software product
2	Study of software product management
3	Study of Software product development standards.
4	Study of Important Steps of Effective Software Product Development Life Cycle
5	Study of singleton design pattern
6	Study of Factory Method
7	Study of strategy pattern
8	Study of Observer pattern
9	Study of builder pattern
10	Study of Adapter pattern

