

GUJARAT TECHNOLOGICAL UNIVERSITY

Master of Computer Applications (Integrated) Year IV – (Semester-VII) (w.e.f. July 2016) Indicative Practical List

Subject Name: Machine Learning

Subject Code: 4470601

a) Suggested Lab Activities

a. Group Activity:

- i. Team size: 2-3 students
- ii. Identify Problem
- iii. Identify an application (MATLAB, Weka, R Programming, etc.) suitable to your problem
- iv. Implement and analyse results
- v. Outcome
 1. prepare presentation and Report (Max 40 Pages) with table of content as below
 - a. Abstract
 - b. Problem Definition
 - c. Experiment
 - d. Results
 - e. Conclusion

PS: For Data one may use large data available on web like KDDCup etc.

- Marks Breakup

Project	10
Performance	10
VIVA	10

b) List of desirable Practicals to be demonstrated.

- 1) Classifying with distance measures,
- 2) Constructing Decision trees and Classification using Decision Trees
- 2) K-means,
- 3) Classification with k-Nearest Neighbors,
- 4) Apriori,
- 5) Support vectormachines,
- 6) Expectation Maximization,
- 7) PageRank,
- 8) AdaBoost,
- 9) Naïve Bayes,
- 10) CART.

Technology: Python

Few Examples which apply above algorithms:

- 1) Handwritten character recognition system
- 2) Using decision trees to predict contact lens type
- 3) Classifying text
- 4) Classifying spam mail with naïve Bayes
- 5) Using naïve bayes' to reveal local attitudes from personal ads

Book for Practical:

1. Peter Harrington, Machine Learning in Action, DreamTech