Prasad V. Potluri Siddhartha Institute of Technology:: Vijayawada.
Department of Computer Science and Engineering
I/II M.Tech. (CSE) (First Semester)

17CSCS1L2   **MACHINE LEARNING LAB**   **Credits: 2**
Lab: 3 Periods/week   **Internal Assessment: 25 Marks**
Semester end examination: 50 Marks

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Course Description:

This course aims to study applied aspects of Machine Learning. It provides knowledge to implement various applications by using techniques like clustering, regression, classification of data.

Course Outcomes:

At the end of this course student will be able to:

   CO1: Implement Clustering, Regression.

   CO2: Implement on Decision Tree & Neural Networks for Classification.

Implement below algorithms by using Python / R Programming / MATLAB.

1. Experiment on "K-means Algorithm" – Clustering.

2. Experiment on Regression.

3. Experiment on Decision Tree.

4. Experiment on Pattern Classifiation using Neural Networks.

5. Student has to submit a project (at the end of the semester) by using above algorithms.

References:

1.   Ethem Alpaydin "Introduction to Machine Learning" Second Edition, PHI, 2010.

2.   Y. S. Abu-Mostafa, M. Magdon-Ismail, and H.-T. Lin, "Learning from Data", AMLBook Publishers, 2012.

3.   P. Flach, "Machine Learning: The art and science of algorithms that make sense of data", Cambridge University Press, 2012.

4.   T. M. Mitchell, "Machine Learning", McGraw Hill, 1997.

5.   K. P. Murphy, "Machine Learning: A probabilistic perspective", MIT Press, 2012.

6.   C. M. Bishop, "Pattern Recognition and Machine Learning", Springer, 2007.

7. D. Barber, "Bayesian Reasoning and Machine Learning", Cambridge University Press, 2012.

8. M. Mohri, A. Rostamizadeh, and A. Talwalkar, "Foundations of Machine Learning", MIT Press, 2012.