

ANURAG ENGINEERING COLLEGE

(An Autonomous Institution)

(CS601PC) MACHINE LEARNING LAB (Professional Elective – I)

III Year B.Tech. IT - II Sem

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Course Objectives:

The objectives of this course are to provide:

- To get an overview of the various machine learning techniques.
- To study the Python Basic Libraries.
- Demonstrate the Machine Learning Techniques using python.
- To Implement Various Machine Learning Algorithms.
- To Understand the Performance analysis of Classification algorithms.

List of Experiments

1. Write a python program to compute Central Tendency Measures: Mean, Median, Mode
Measure of Dispersion: Variance, Standard Deviation
2. Study of Python Basic Libraries such as Statistics, Math, Numpy and Scipy
3. Study of Python Libraries for ML application such as Pandas and Matplotlib
4. Write a Python program to implement Simple Linear Regression
5. Implementation of Multiple Linear Regression for House Price Prediction using sklearn
6. Implementation of Decision tree using sklearn and it's parameter tuning
7. Implementation of KNN using sklearn
8. Implementation of Logistic Regression using sklearn
9. Implementation of K-Means Clustering
10. Performance analysis of Classification Algorithms on a specific data set (MiniProject)

Course Outcomes:

Upon the successful completion of this course, the student will be able to:

1. Understand modern notion in predictive data analysis.
2. Select data, model selection, model complexity and identify the trends.
3. Understand a range of machine learning algorithms along with their strengths and weaknesses.
4. Build predictive models from data and analyse their performance.
5. Understand the Performance Analysis of Classification Algorithms

TEXTBOOK:

1. Machine Learning – Tom M. Mitchell, – MGH.

REFERENCEBOOK:

1. Machine Learning: An Algorithmic Perspective, Stephen Marshland, Taylor & Francis.

CO-PO-PSO Mapping:

	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12	PSO-1	PSO-2
CO-1	L												L	
CO-2		M		M	M								L	
CO-3	M	M												M
CO-4			H	M	M									M
CO-5		M		L									L	

H-HIGH M-MODERATE L-LOW