



SRI VENKATESWARA COLLEGE OF ENGINEERING

COURSE DELIVERY PLAN - LAB

Department of Information Technology	LP: IT22611 Rev. No: 00
B.E/B.Tech/M.E/M.Tech : INT Regulation: 2022 PG Specialisation : NA Sub. Code / Sub. Name : IT22611 / Machine Learning Techniques Laboratory	Date: 21-01-2025

Session No*	List of Experiments
CYCLE-I	
1	Implementation of Programs using Python Libraries- Numpy, Pandas, SciPy, Matplotlib, Scikit Learn
2	Implementation of data preprocessing techniques.
3	Performing Exploratory Data Analysis for a dataset- Handling missing values or human error, Identifying outliers.
4	Implementation of Feature Engineering concepts– Feature improvements, Feature selection, Feature extraction, Feature construction, Feature transformations, Feature learning
5	Implementation of Linear Regression Algorithm Implementation of Logistics Regression Algorithm
6	Implementation of Decision Tree Classification Algorithm Implementation of K-Means Clustering Algorithm
7	Implementation of Support Vector Machine Algorithm
CYCLE-II	
8	Implementation of Dimensionality Reduction Technique
9	Implementation of Lasso Regression Algorithm Implementation of Ridge Regression Algorithm
10	Implementation of Ensemble learning method -Adaboost & Random Forest
11	Implementation of Hyperparameter optimization Techniques - Manual Search, Random Search, Grid Search, Halving Grid Search, Randomized Search., Automated Hyperparameter tuning, Bayesian Optimization, Genetic Algorithms.
12	Implementation of Bayes Search Modeling
13	Implementation of forecasting techniques for real life time series data- linear stationary and non-stationary data, Methods to Check Stationary, Convert Non-Stationary Into Stationary, Moving Average Methodology (SMA, CMA, EMA)
14	Deployment of Machine Learning Models - Simple Web API using Flask library.
15	Model Exam
Content beyond syllabus (if any):	

* Session Duration: 150 minutes



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Course Outcomes:

Course Outcome 1: Understand ML and its significance in real-time industry applications.

Course Outcome 2: Design and implement algorithms for an application and analyze the results

Course Outcome 3: Distinguish between, supervised, unsupervised and semi-supervised learning and suggest suitable learning algorithms for any given problem.

Course Outcome 4: Modify existing machine learning algorithms to improve its efficiency.

Course Outcome 5: Demonstrate an understanding of advanced learning models.

Mapping – CO – PO :

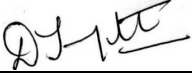

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	1		3	1		1	1	1	1			2	
CO2	1		1	2	1									
CO3	1	3	3		2									
CO4	1		3		3			1	1	1			2	
CO5	2	3		3	1		1	1	1	1			2	



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	Prepared by	Approved by
Signature		
Name	Dr.D.Jayanthi	Dr.V.Vidhya
Designation	Associate Professor	Professor & Head
Date	21-01-2025	21-01-2025
Remarks* :		
Remarks* :		

* If the same lab plan is followed in the subsequent semester/year it should be mentioned and signed by the Faculty and the HOD