

**PVP SIDDHARTHA INSTITUTE OF TECHNOLOGY, KANURU, VIJAYAWADA
(AUTONOMOUS)
INFORMATION TECHNOLOGY**

MACHINE LEARNING LAB

Course Code	20IT3651	Year	III	Semester	II
Course Category	PC	Branch	IT	Course Type	Practical
Credits	1.5	L-T-P	0-0-3	Prerequisites	Python Programming Language
Continuous Internal Evaluation :	15	Semester End Evaluation:	35	Total Marks:	50

Course Outcomes		
Upon successful completion of the course, the student will be able to		
CO1	Apply Python programming constructs for solving problems.	L3
CO2	Implement programs as an individual on different IDEs/ online platforms.	-
CO3	Develop an effective report based on various programs implemented.	-
CO4	Apply technical knowledge for a given problem and express with an effective oral communication.	L3
CO5	Analyze outputs using given constraints/test cases.	L4

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:Substantial, 2: Moderate, 1:Slight)														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	2	2		2								2	2
CO2	3		3		3								3	3
CO3										3			3	3
CO4	1									1			1	1
CO5		3											3	3

Syllabus		
Expt No	Exercises	Mapped CO
1.	Apply Data preprocessing techniques.	CO1-CO5
2.	Construct a Regression model using Supervised learning method.	CO1-CO5
3.	Construct a Classification model using Supervised learning method.	CO1-CO5
4.	Construct a machine learning model using Unsupervised partition clustering method.	CO1-CO5
5.	Construct a machine learning model using Unsupervised hierarchical clustering method.	CO1-CO5
6.	Construct a machine learning model for Association analysis.	CO1-CO5
7.	Apply Reinforcement learning technique to build an application.	CO1-CO5

Learning Resources
Text Books
1. Introduction to Machine Learning with Python Andreas C Muller & Sarah Guido First Shroff Publishers 2019 2. Introduction to Machine Learning, Ethem Alpaydin, Second Edition, 2010, Prentice Hall of India. 3. Machine Learning, Anuradha Srinivasaraghavan, and Vincy Joseph, Kindle Edition, 2020, WILEY.
References
1. Machine Learning by Tom M. Mitchell, International Edition 1997, McGraw Hill Education. 2. Machine Learning a Probabilistic Perspective, Kevin P Murphy & Francis Bach, First Edition, 2012, MIT Press. 3. Introduction to Data Mining, Tan, Vipin Kumar, Michael Steinbach, 9 th Edition, 2013, Pearson 4. “Deep Learning”, Ian Goodfellow, Yoshua Bengio, Aaron Courville, 2016, MIT Press.
e- Resources & other digital material
1. https://www.coursera.org/learn/machine-learning-with-python 2. https://nptel.ac.in/courses/106/106/106106139/