AI TOOLS LAB

Course Code	19ES1451	**Year**	II	**Semester**	II
Course Category	Engineering Sciences	**Branch**	ME	**Course Type**	Practical
Credits	1	**L – T – P**	0 – 0 – 2	**Prerequisites**	Problem solving with python
Continuous Internal Evaluation	25	**Semester End Evaluation**	50	**Total Marks**	75

Course Outcomes		**Levels**
After successful completion of the course, the student will be able to		
CO1	Apply various preprocessing techniques and Machine Learning/ Deep Learning methods on different datasets for a given problem.	L3
CO2	Implement various experiments in Jupyter Notebook Environment.	L3
CO3	Develop an effective report based on various learning methods implemented.	L3
CO4	Apply technical knowledge for a given scenario and express with an effective oral communication.	L3
CO5	Analyze the outputs and visualizations generated for different datasets.	L4

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

Syllabus		
Expt. No	**Contents**	**Mapped CO**
1.	Apply Data pre-processing techniques.	**CO1, CO2, CO3, CO4, CO5**
2.	Construct a Machine Learning model using supervised learning method.	**CO1, CO2, CO3, CO4, CO5**
3.	Construct a Machine Learning model using Unsupervised learning method.	**CO1, CO2, CO3, CO4, CO5**
4.	Construct a Machine Learning model using Semi supervised learning method.	**CO1, CO2, CO3, CO4, CO5**
5.	Develop a Deep Learning model using supervised learning method.	**CO1, CO2, CO3, CO4, CO5**

6.	Develop a Deep Learning model using Unsupervised learning method.	**CO1, CO2, CO3, CO4, CO5**
7.	Apply a Convolutional Neural Network for Image Classification.	**CO1, CO2, CO3, CO4, CO5**
8.	Build an AI application.	**CO1, CO2, CO3, CO4, CO5**

Learning Recourse(s)
Text Books
1. Artificial Intelligence: A Modern Approach, Stuart Russell and Norvig, Third Edition, 2015, Pearson Education. 2. Machine Learning: A Probabilistic Perspective, Kevin P. Murphy, 2012, MIT Press 3. Deep Learning (Adaptive Computation and Machine Learning series), Ian Good fellow , Yoshua Bengio, Aaron Courville, Francis Bach, 2017, MIT Press
e- Resources & other digital material
1. https://github.com/atinesh-s/Coursera-Machine-Learning-Stanford 2. https://github.com/Kulbear/deep-learning-coursera