AI TOOLS LAB

Course Code	20SO8453	Year	II	Semester	II
Course Category	Skill Oriented Course	Branch	ECE	Course Type	Lab
Credits	2	L-T-P	1-0-2	Prerequisites	Nil
Continuous Internal Evaluation	0	Semester End Evaluation	50	Total Marks	50

Course Outcomes		
Upon successful completion of the course, the student will be able to:		
CO1	Apply various pre-processing 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	
Average* (Roundedto nearest integer)	3	3			2				2	2		2	2	

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

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

Learning Resources
Text Books
1. Artificial Intelligence: A Modern Approach, Stuart Russell and Norvig, Third Edition, 2015, **2.** Pearson Education. **3.** Machine Learning: A Probabilistic Perspective, Kevin P. Murphy, 2012, MIT Press **4.** Deep Learning (Adaptive Computation and Machine Learning series), Ian Goodfellow , 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