

AI TOOLS LAB

Course code	20SO8453	Year	II	Semester	II
Course category	Skill Oriented Course	Branch	ME	Course Type	Lab
Credits	2	L-T-P	1-0-2	Prerequisites	Probability, Statistics
Continuous Internal Evaluation	-	Semester End Evaluation	50	Total Marks	50

Course outcomes: At the end of the course, the student will be able to

CO's	Statement	Skill	BTL	Experiments
CO1	Apply various preprocessing techniques and Machine Learning/ Deep Learning methods on different datasets for a given problem.	Apply	L3	E1-E7
CO2	Implement various experiments in Jupiter Notebook Environment.	Apply	L3	E1-E7
CO3	Develop an effective report based on various learning methods implemented.	Apply	L3	E1-E7
CO4	Apply technical knowledge for a given scenario and express with an effective oral communication.	Apply	L3	E1-E7
CO5	Analyze the outputs and visualizations generated for different datasets.	Analyse	L4	E1-E7

**Course outcomes towards achievement of programme outcomes & Strength of correlations
(High :3, Medium :2, Low :1)**

	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								1			1	

Any Ten Experiments (H/W or Simulation)

Expt. 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.	Build an AI application.	CO1-CO5

Learning Resources	
Text Books	
<ol style="list-style-type: none">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 Press3. Deep Learning (Adaptive Computation and Machine Learning series), Ian Goodfellow , Yoshua Bengio, Aaron Courville, Francis Bach, 2017, MIT Press	
e-Resources & other digital material	
<ol style="list-style-type: none">1. https://github.com/atinesh-s/Coursera-Machine-Learning-Stanford2. https://github.com/Kulbear/deep-learning-coursera	