

AI TOOLS LAB

Course Code	20SO8453	Year	II	Semester	II
Course Category	Skill Oriented Course	Branch	ME	Course Type	Lab
Credits	1.5	L-T-P	1-0-2	Prerequisites	Probability, Statistics
Continuous Internal Evaluation	-	Semester End Evaluation	50	Total Marks	50

Course Outcomes: Upon successful completion of the course, the student will be able to

CO	Statement	Levels
CO1	Apply various preprocessing techniques and Machine Learning/ Deep Learning methods on different datasets for a given problem.	L3
CO2	Implement various experiments in Jupiter 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	

Syllabus		
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"> Artificial Intelligence: A Modern Approach, Stuart Russell and Norvig, Third Edition, 2015, Pearson Education. Machine Learning: A Probabilistic Perspective, Kevin P. Murphy, 2012, MIT Press 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"> https://github.com/atinesh-s/Coursera-Machine-Learning-Stanford https://github.com/Kulbear/deep-learning-coursera