Prasad.V.Potluri Siddhartha Institute of Technology, Kanuru, Vijayawada

AI Tools

(Common to all)

Course Code	19ES1301	Year	II	Semester	I
Course Category	ES	Branch	IT	Course Type	Theory
Credits	2	L-T-P	2-0-0	Prerequisites	-
Continuous Internal Evaluation	30	Semester End Evaluation	70	Total Marks:	100

	Course Outcomes	Blooms Taxonomy Level
Upon Successful completion of course, the student will be able to		
CO1	Understand the Fundamentals of Artificial Intelligence and its Applications.	L2
CO2	Summarize various machine learning methods.	L2
CO3	Identify different machine learning applications.	L3
CO4	Compare Machine Learning & Deep Learning and Outline basic Deep Learning Algorithm.	L2
CO5	Make use of Deep Learning Concepts for various Applications.	L3

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

Syllabus		
Unit No	**Contents**	**Mapped CO**
I	**Introduction to Artificial Intelligence:** What is AI, Foundations of AI, Goals of AI, and Applications of AI.	**CO1**
II	**Machine Learning: Definition, Learning Methods:** Supervised Learning, Unsupervised Learning, Semi-Supervised Learning, Reinforcement Learning.	**CO2**
III	**Machine Learning Applications:** Computer vision, Speech Recognition, Natural Language Processing, Decision Making process.	**CO3**
IV	**Deep Learning:** Basics of Deep Learning, Machine Learning Vs Deep Learning, Fundamental Deep Learning Algorithm-Convolution Neural Network (CNN).	**CO4**
V	**Deep Learning Applications:** Computer vision, Speech Recognition, Natural Language Processing, Decision Making process.	**CO5**

Learning Resources
Text Books
1. Artificial Intelligence: A Modern Approach, Stuart Russell and Norvig, Third Edition, 2015, Pearson Education. **(Unit-1)** 2. Machine Learning: A Probabilistic Perspective, Kevin P. Murphy, 2012, MIT Press **(Unit-2&3)** 3. Deep Learning (Adaptive Computation and Machine Learning series), Ian Goodfellow , Yoshua Bengio, Aaron Courville, Francis Bach, 2017, MIT Press. **(Unit-4&5)**
e-Resources & other digital material
1. https://swayam.gov.in/nd1_noc19_cs52/preview 2. https://swayam.gov.in/nd1_noc19_cs85/preview 3. https://emerj.com/ai-sector-overviews/machine-learning-healthcare-applications/