Satyug Darshan Institute of Engineering and Technology

Lesson Plan / Teaching Plan / Lecture Plan with Progress : B Tech – 7TH Semester : 2025-26

Course Name (Code) : Data Analytics(PEC-CS-D-702(1)) Faculty – Ms.Shivani

Topics / lectures are arranged in sequence - same - as to be taught in the class. Maintain data related to "Date" in its hard copy.

S. No.	Lecture No	Topic Description	Teaching Pedagogy	Reference Material	Remarks, if any
1	1	Introduction to Data Analytics	Board	T1	
2	2	Process of Data Analytics	Board	T1	
3	3	Types of Data Analytics	Board	T1	
4	4	Technical Tools in Data Analytics	Board	T1	
5	5	Types of Variants	Board	T1	
6	6	Basics of Statistics	Board	T1	
7	7	Descriptive Statistics	Board	T1	
8	8	Measure of Central Tendency	Board	T1	
9	9	Measure of Spread and Shape	Board	T1	
10	10	Probability Distributions and types	Board	T1	
11	11	Binomial and Poisson Distribution	Board	T1	
12	12	Inferrential Statistics	Board	T1	
13	13	Hypothesis Statistics	Board	T1	
14	14	Anova-One way	Board	T1	
15	15	Anova-Two way	Board	T1	
16	16	Regression and its types	Board	T1	
17	17	Source of Variation	Board	T1	
18	18	Simple Linear Regression	Board	T1	
19	19	Classification	Board	T1	
20	20	Machine Learning-Supervised & Unsupervised Learning	Board	T1	
21	21	Differentiating Algorithm	Board	T1	
22	22	Ridge and Lasso	Board	T1	
23	23	Supervised Learning using Regression	Board	T1	
24	24	Classification Example for Prediction	Board	T3	
25	25	Bias and Variance	Board	T3	
26	26	Various conditions in Dataset	Board	T1	
27	27	Regulization Techniques	Board	T1	
28	28	Logistic Regression	Board	T3	
29	29	Linear Discriminant Analysis	Board	T3	
30	30	Various Steps of LDA	Board	T3	
31	31	Eigen Vectors	Board	T3	
32	32	Random Forest	Board + PPT	T1, T3	
33	33	Artificial Neural Network	Board + PPT	T3	
34	34	Types of ANN	Board + PPT	T1,T3	
35	35	Deep Learning and its types	Board + PPT	T3	
36	36	Clustering	Board + PPT	T3	
37	37	Association Mining Rule with Examples	Board + PPT	T3	
38	38	Ensemble Methods	Board + PPT	T3	
39	39	Random Forest Algorithm	Board + PPT	T3	
40	40	Challenges in Big Data Analysis	Board + PPT	T3	
41	41	Create Analysis using Active Learning	Board + PPT	T3	
42	42	Design of Experiment Analysis	Board + PPT	T1, T3	
43	43	Feedforward and Feedback Network	Board + PPT	T1	
44	44	Reinforcement Learning Analysis	Board + PPT	T1	
45	45	Numerical Attempt	Board + PPT	T1	
46	46	Numerical Attempt	Board + PPT	T1	
47	47	Numerical Attempt	Board + PPT	T3	
48	48	Revision			

Study Material / Books / Web-resources / Online Courses Links etc.

S. No.	Description
1	Hastie, Trevor, et al. The elements of statistical learning. Vol. 2. No. 1. New York: springer, 2009.
2	Montgomery, Douglas C., and George C. Runger. Applied statistics and probability for engineers. John Wiley & Sons, 2010.
3	Michael Berthold, David J. Hand, Intelligent Data Analysis, Springer, 2007.
4	Anand Rajaraman and Jeffrey David Ullman, Mining of Massive Datasets, Cambridge University Press, 2012.