



K. S. SCHOOL OF ENGINEERING AND MANAGEMENT, BENGALURU - 560109
DEPARTMENT OF MBA
SESSION: 2023-2024 (EVEN SEMESTER)
IV Semester, MBA (Batch: 2022-24)
LESSON PLAN

NAME OF THE STAFF : ARUNDATHI KL
COURSE CODE/TITLE : 22MBABA403/ Machine learning
SEMESTER/YEAR : IV SEMESTER / II YEAR

Sl. No.	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date	Delivery Date
MODULE 1							
1	Supervised and Unsupervised Learning: Regression and classification models,	L	BB/LCD	1	1	10/6/2024	10/6/24
2	Decision tree, Classification of regression trees,	L+D	BB/LCD	1	2	12/6/2024	11/6/24
3	linear, multiple, logistic regression,	L+D	BB/LCD	1	3	12/6/2024	12/6/24
4	neural networks, multi layer perceptron,	L+D	BB/LCD	1	4	14/6/2024	24/6/24
5	support vector machines, linear and non-linear kernel functions,	L+D	BB/LCD	1	5	18/6/2024	25/6/24
6	introduction to clustering and k model clustering. cases	L+D	BB/LCD	2	7	21 & 24/6/2024	26/6/24
MODULE 2							
7	Decision tree and generic algorithms: Basic decision tree algorithm, information gain, hypothesis space,	L+D+PC	BB/LCD	1	8	25/6/2024	28/6/24
8	inductive bias, issues in decision tree learning,	L+D+PC	BB/LCD	1	9	26/6/2024	1/7/24
9	determining the correct and final tree size, pruning.	L+D+PC	BB/Lab	1	10	28/6/2024	2/7/24

	Genetic Algorithms:						
10	Motivation, Genetic Algorithms: Representing Hypotheses, Genetic Operator,	L+D+PC	BB/Lab	1	11	1/7/2024	3/7/24
11	Fitness Function and Selection, An Illustrative Example, Hypothesis Space Search,	L+D+PC	BB/Lab	1	12	2/7/2024	5/7/24
12	Genetic Programming, Models of Evolution and Learning: Lamarkian Evolution	L+D+PC	BB/Lab	1	13	3/7/2024	8/7/24
13	Baldwin Effect, Parallelizing Genetic Algorithms. cases	L+D+PC	BB/Lab	2	15	5& 12/7/2024	9/7/24
MODULE 3							
14	Ensemble and probabilistic learning: Model Combination Schemes, Voting,	L+D+PC	BB/LCD	1	16	15/7/2024	10/7/24
15	Error-Correcting Output Codes, Bagging: Random Forest Trees,	L+D+PC	BB/LCD	1	17	16/7/2024	12/7/24
16	Boosting: Adaboost, Stacking. Gaussian mixture models	L+D+PC	BB/Lab	1	18	22/7/2024	23/7/24
17	The Expectation-Maximization (EM) Algorithm, Information Criteria	L+D+PC	BB/Lab	1	19	23/7/2024	23/7/24
18	Nearest neighbor methods - Nearest Neighbour Smoothing	L+D+PC	BB/Lab	1	20	24/7/2024	24/7/24
19	Efficient Distance Computations: the KD-Tree,	L+D+PC	BB/Lab	1	21	26/7/2024	26/7/24
20	Distance Measures. cases	L+D+PC	BB/Lab	2	23	29/7/2024	31/7/24
MODULE 4							
21	Reinforcement Learning and Evaluating Hypotheses	L+D+PC	BB/LCD	1	24	2/8/2024	5/8/24
22	Learning Task, Q Learning, Non deterministic Rewards and actions	L+D+PC	BB/Lab	1	25	9/8/2024	6/8/24
23	temporal-difference learning, Relationship to Dynamic Programming,	L+D+PC	BB/Lab	1	26	12/8/2024	7/8/24
24	Active reinforcement learning, Generalization in reinforcement learning.	L+D+PC	BB/Lab	1	27	13/8/2024	12/8/24

25	Motivation, Basics of Sampling Theory:	L+D+PC	BB/Lab	1	28	14/8/2024	12/8/24
26	Error Estimation and Estimating Binomial Proportions,	L+D+PC	BB/Lab	1	29	16/8/2024	16/8/24
27	The Binomial Distribution, Estimators, Bias, and Variance	L+D+PC	BB/Lab	2	31	19 & 20/8/2024	23/8/24
MODULE 5							
28	Introduction to Virtual Reality and Virtual Environment:	L+D+PC	BB/Lab	1	32	21/8/2024	24/8/24
29	Computer and Real time computer graphics,	L+D+PC	BB/Lab	1	33	23/8/2024	26/8/24
30	Flight Simulation, Virtual environment requirement, benefits of virtual reality	L+D+PC	BB/Lab	1	34	24/8/2024	28/8/24
31	Augmented Reality: Taxonomy, technology and features of augmented reality,	L+D+PC	BB/Lab	1	35	26/8/2024	30/8/24
32	difference between AR and VR, Challenges with AR, AR systems and functionality,	L+D+PC	BB/Lab	1	36	27/8/2024	31/8/24
33	Augmented reality methods, visualization techniques for augmented reality,	L+D+PC	BB/Lab	1	37	28/8/2024	2/9/24
34	enhancing interactivity in AR environments, evaluating AR systems.	L+D+PC	BB/Lab	1	38	30/8/2024	2/9/24
MODULE 6							
35	Introduction to ML ... : Creativity and motivation,	L+D+PC	BB/Lab	1	39	2/9/2024	3/9/24
36	Computer hardware architecture,	L+D+PC	BB/Lab	1	40	3/9/2024	4/9/24
37	understanding programming,	L+D+PC	BB/Lab	1	41	4/9/2024	4/9/24
38	word and sentence	L+D+PC	BB/Lab	1	42	6/9/2024	6/9/24
39	Conversing with Python,	L+D+PC	BB/Lab	1	43	9/9/2024	6/9/24
40	Terminology, Debugging, The learning journey	L+D+PC	BB/Lab	1	44	10/9/2024	10/9/24
41	Revision	L+D+PC	BB/Lab	1	45	11/9/2024	10/9/24
42	Revision	L+D+PC	BB/Lab	1	46	13/9/2024	13/9/24
43	Model Paper discussion if available	L+D+PC	BB/Lab	1	47	14/9/2024	


Total No. of Lecture Hours = 30

Total No. of Practical Hours = 10

Total No. of Revision Hours = 03

	Mode of Assignment and instructions	Date
Assignment 1	Practice on visualisation of data tools and understand the machine interaction. Certificate should be done in Machine learning and hardcopy has to be submitted. https://onlinecourses.nptel.ac.in/noc24_cs81/preview	04/07/2024
Assignment 2	Analyse the Google map for traffic congestion in a big city if IOT is implemented	01/08/2024
Assignment 3	Learn simple algorithms and solve business problems using decision tree and simulations	04/09/2024


Course In charge


HOD - MBA


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