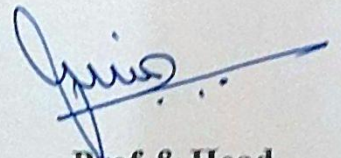


Dr. Ambedkar Institute of technology, Bengaluru-56  
Department of Computer Science & Engineering

The enclosed documents are verified & approved.



**Prof & Head**

Dr. Siddaraju

Department of Computer Science & Engineering

**Professor & Head**  
Department of Computer Science & Engineering  
Dr. Ambedkar Institute of Technology  
Bangalore-560 056.



**Dr. Ambedkar Institute of Technology,**  
**Bangalore-560056**  
**Department of Computer Science & Engineering**

**LESSON PLANNING**

Name of the staff: **Asha K N**


Designation: **Assistant Professor**

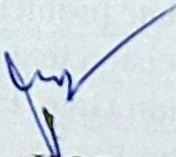
Subject : **Machine Learning**

Code : **18CS62**

Lecture No.	UNIT No.	Topics to be Covered
1	Unit 1	<b>Introduction:</b> Introduction to Machine Learning
2		Well posed learning problems
3		Designing a Learning system
4		Designing a Learning system
5		Perspective and Issues in Machine Learning
6		<b>Concept Learning:</b>
		Concept learning task, Concept learning as search
7		Find-S algorithm
8		Version space
9		Candidate Elimination algorithm
10	Inductive Bias	
11	Unit 2	<b>Decision Tree Learning:</b> Decision tree representation
12		Appropriate problems for decision tree learning
13		Basic decision tree learning algorithm,
14		Information Gain, Entropy
15		An Illustrative Example
16		ID3 Algorithm
17		An Illustrative Example
18		Hypothesis space search in decision tree learning,
19		Inductive bias in decision tree learning
20		Issues in decision tree learning.
21	Unit 3	<b>Artificial Neural Networks:</b> Fundamental Concepts
22		Evolution of Neural Network
23		Basic Model of ANN, Important terminologies of ANN
24		McCulloch-Pitts Neuron
25		Illustrative Examples
26		Linear Separability
27		Illustrative Examples
28		Hebb Network, Perceptron Networks
29		Illustrative Examples
30		Adaptive Linear Neuron
31		Backpropagation Network
32		Radial Basis function network.

33	Unit 4	<b>Bayesian Learning: Introduction</b>
34		Bayes theorem, Bayes theorem and concept learning.
35		ML and LS error hypothesis
36		ML for predicting probabilities
37		MDL principle,
38		Naive Bayes classifier
39		An Illustrative Example
40		Bayesian belief networks
41		An Illustrative Example
42		EM algorithm
43	Unit 5	<b>Evaluating Hypothesis:</b>
44		Motivation, Estimating hypothesis accuracy
45		Basics of sampling theorem, General approach for der confidence intervals
46		Difference in error of two hypothesis
47		Comparing learning algorithms.
48		<b>Instance Based Learning: Introduction</b>
49		k-nearest neighbor learning
50		An Illustrative Example
51		locally weighted regression
52		radial basis function
		cased-based reasoning

  
Signature of Staff

  
HOD

Principal



# Dr. Ambedkar Institute of Technology

(An Autonomous Institution, Aided by Government of Karnataka  
Affiliated to Visvesvaraya Technological University, Belgaum & Approved by AICTE, New Delhi)  
BDA Outer Ring Road, Near Jnana Bharathi Campus, Mallathally, Bengaluru-560056

Department of Computer Science & Engineering

## Work Done Statement

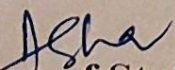
Name of the staff: Asha K N  
Subject : Machine Learning  
Credits:4


Designation: Asst. Professor  
Code : 18CS62  
Sem/Section : 6<sup>th</sup> B

Classes	Date	Topics Covered	Staff sign	HOD Sign
1.	7/4	Syllabus overview, intro to ML	Asha	
2.	9/4	well posed learning problem	Asha	
3.	12/4	Designing Learning system	Asha	
4.	15/4	Designing Learning system step ① thru ⑤	Asha	
5.	16/4	Perspective & Issues in ML	Asha	
6.	20/4	concept learning as a task	Asha	
7.	21/4	concept learning as a search	Asha	
8.	22/4	find-S algm, egs	Asha	
9.	26/4	Version space	Asha	
10.	27/4	Candidate Elimination algm, egs	Asha	
11.	28/4	Inductive bias	Asha	
12.	29/4	Decision tree - Intro, represent	Asha	
13.	30/4	Appropriate problems for DT	Asha	
14.	3/5	Basic DTL algm	Asha	
15.	5/5	Info Gain, Entropy	Asha	

16.	5/5	An illustrative eg.	Asha
17.	7/5	ID3 algm	Asha
18.	10/5	DTL more egs solved	Asha
19.	10/5	Hypothesis space search in DTL	Asha
20.	11/5	Issues in DTL	Asha
21.	12/5	ANN - fundamental concepts	Asha
22.	13/5	Evolution of NN	Asha
23.	14/5	Basic models & imp. terminologies of ANN	Asha
24.	24/5	M.P Neuron	Asha
25.	25/5	Illustrative egs	Asha
26.	27/5	Linear Separability	Asha
27.	1/6	Illustrative egs.	Asha
28.	2/6	Hebb N/W, egs	Asha
29.	3/6	Perceptron N/Ws, egs	Asha
30.	4/6	Adaptive linear neuron	Asha
31.	8/6	Backpropagation N/W	Asha
32.	9/6	Radial basis function N/W	Asha
33.	10/6	Bayesian Learning - Intro	Asha
34.	11/6	Bayes theorem, concept learning	Asha
35.	14/6	Max likelihood & least mean square hypothesis	Asha

36.	15/6	max likelihood for predicting probabilities	Asha
37.	16/6	minimum Description Length principle	Asha
38.	17/6	Naive Bayes's Classifier	Asha
39.	18/6	An Illustrative eg.	Asha
40.	21/6	Bayesian Belief N/W	Asha
41.	22/6	An Illustrative eg.	Asha
42.	23/6	EM algm	Asha
43.	24/6	Instance based learning: intro	Asha
44.	25/6	KNN Learning	Asha
45.	26/6	KNN prg in python	Asha
46.	26/6	Locally weighted regression	Asha
47.	28/6	Radial Basis Function	Asha
48.	29/6	Case-based reasoning	Asha
49.	1/7	Estimating hypothesis accuracy	Asha
50.	1/7	Basics of sampling theorem	Asha
51.	2/7	confidence Intervals	Asha
52.	3/7	comparing learning algms	Asha

  
Signature of Staff

  
HOD