



SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

AN AUTONOMOUS INSTITUTION

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Academic Year 2022-2023 (Even)

Department of Computer Science and Technology.

19TS622-MACHINE LEARNING

Unit 1



PART – A			
Q.No.	Questions	BT Level	Competence
1	Define Machine Learning.	BTL 1	Remembering
2	Compare learning vs programming.	BTL 2	Understanding
3	Examine the importance of machine learning algorithms.	BTL 4	Analyzing
4	Summarize algorithm technique in ML	BTL 2	Understanding
5	What are major components involved in each machine algorithm?	BTL 1	Remembering
6	List different forms of learning.	BTL 1	Remembering
7	Build the machine learning framework.	BTL 3	Applying
8	Draw basic learning system model.	BTL 3	Applying
9	What are the factors affecting the performance of machine learning algorithm?	BTL 1	Remembering
10	Compare generic machine model and discriminate machine learning model.	BTL 2	Understanding
11	Discuss major applications of machine learning.	BTL 6	Creating
12	Define Gaussian process.	BTL 2	Understanding
13	Distinguish Joint probability vs conditional probability.	BTL 4	Analyzing
14	Point out/examine supervised learning category and technique.	BTL 4	Analyzing
15	Define maximum likelihood estimation (MLE).	BTL 2	Understanding
16	Explain semi supervised learning?	BTL 5	Evaluating
17	Explain Inductive machine learning?	BTL 5	Evaluating
18	How AI differ from Machine learning?	BTL 1	Remembering
19	Discuss the difference between training set and testing set.	BTL 6	Creating
20	List the application software tools.	BTL 1	Remembering

PART – B				
Q.No.	Questions	Marks	BT Level	Competence
1	What is machine learning? Discuss about learning and machine learning. Choose various types of machine learning.	13	BTL 1	Remembering
2	Demonstrate the supervised learning structure.	13	BTL 2	Understanding
3	Explain briefly about unsupervised learning structure?	13	BTL 2	Understanding

4	Examine in detail about machine learning process with an example.	13	BTL 4	Analyzing
5	Explain various learning techniques involved in supervised learning?	13	BTL 5	Evaluating
6	Explain various learning techniques involved in unsupervised learning?	13	BTL 5	Evaluating
7	How to develop /frame inductive learning and summarize the machine learning process?	13	BTL 1	Remembering
8	Explain generative machine learning model and analyze how it differ from discriminative machine learning model?	13	BTL 4	Analyzing
9	What is Gaussian process? And explain in detail of Gaussian parameter estimates with suitable examples.	13	BTL 1	Remembering
10	Develop procedure in parameter estimation for Bayesian parameter estimation.	13	BTL 3	Applying
11	Discuss about MLE and how it derive from MAP and extreme estimator.	13	BTL 6	Creating
12	Summarize the advantages and disadvantages of Gaussian process	13	BTL 2	Understanding
13	Explain list of application software tools used in machine learning and describe each tools in details.	13	BTL 1	Remembering
14	Short note on a) Bias and variance b) Bias and variance trade off	6 7	BTL 2	Understanding

PART – C

Q.No.	Questions	Marks	BT Level	Competence
1	Find the covariance and correlation coefficient of data $X=\{1,2,3,4,5\}$ and $Y=\{1,4,9,16,25\}$	15	BTL 6	Creating
2	Define SVD. Explain the procedure for decomposition matrix with suitable example	15	BTL 5	Evaluating
3	Discuss the difference and tradeoff between two factors of bias and variance. How these factor play a role in machine learning models. Explain.	15	BTL 6	Creating
4	Explain what are the various metrics used to evaluate the machine learning model performance	15	BTL 5	Evaluating