Roll No.												

PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations – October 2025

Date: 07-10-2025 **Time:** 02.00pm to 03.30pm

School: SOCSE	**Program:** B.Tech CSD	
Course Code : ADS2004	**Course Name:** MACHINE LEARNING FOR INTELLIGENT DATA SCIENCE	
Semester: V	**Max Marks**:50	**Weightage**:25%

CO - Levels	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
Marks	**26**	**24**			

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks. **5Q x 2M=10M**

1	Recall the main features of data cleaning tools.	**2 Marks**	**L1**	**CO1**
2	Identify key tools that support data science workflows.	**2 Marks**	**L1**	**CO1**
3	How can I apply the three dimensions to classify data scientist roles.	**2 Marks**	**L1**	**CO1**
4	What is the definition of Recall in classification?	**2 Marks**	**L1**	**CO2**
5	State the formula for calculating the F1 Score.	**2 Marks**	**L1**	**CO2**

Part B

Answer the Questions. **Total Marks 40M**

6.	**a.**	Describe the qualities that define effective data-analytic thinking.	**10 Marks**	**L2**	**CO1**
		Or			
7.	**a.**	Illustrate how the convergence of different fields or ideas results in novel opportunities or understandings.	**10 Marks**	**L2**	**CO1**

8.	**a.**	Interpret the implication of the regression coefficient for a particular model.	**10 Marks**	**L2**	**CO1**
		Or			
9.	**a.**	Explain the distinction between positive and negative correlation.	**10 Marks**	**L2**	**CO1**

10.	**a.**	Highlight the differences in accuracy and robustness between Random Forests and a single decision tree.	**10 Marks**	**L2**	**CO2**
		Or			
11.	**a.**	Illustrate the process by which PCA changes correlated variables into uncorrelated components.	**10 Marks**	**L2**	**CO2**

12.	**a.**	Distinguish the components of a decision tree as root, branches, and leaves.	**10 Marks**	**L2**	**CO2**
		Or			
13.	**a.**	Compare the processes of training a model and testing a model.	**10 Marks**	**L2**	**CO2**