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**Presidency University**

**Bengaluru**

**SCHOOL OF COMMERCE**

**SUMMER TERM END TERM EXAMINATION AUGUST 2024**

**Winter Semester**: 2023 - 24

**Course Code**: BBB3004/MGI256

**Course Name**: Machine Learning

**Program & Sem**: BBA / V

**Date**: 12/08/2024

**Time**: 9:30 AM - 12:30 PM

**Max Marks**: 100

**Weightage**: 50%

**Instructions:**

1. *Read the all questions carefully and answer accordingly.*
2. *Question paper consists of three parts.*
3. *Scientific and Non Programable Calculators are Permitted.*
4. *Do not write any information on the question paper other than roll number.*

**Part A**

**Answer any FIVE Questions. (5Q x 2M = 10 M)**

1. Define Machine Learning Model?

(C.O.No.1) [Understand]

1. List any two strengths of Python Programming.

(C.O.No.2) [Remember]

1. Explain the use of Jupyter Notebook

(C.O.No.2) [Remember]

1. Define Box Plot.

(C.O.No.1) [Understand]

1. Describe Data Labelling.

(C.O.No.3) [Apply]

1. Explain one advantage of Bar Chart.

(C.O.No.2) [Remember]

1. What is File Management?

(C.O.No.1) [Understand]

**Part B**

**Answer any Five Questions. (5Q x 10M = 50 M)**

1. Describe the process of constructing a machine learning model. Outline the essential steps involved in this process.

(C.O.No.1) [Understand]

1. Analyze the strengths and weaknesses of Python as a programming language. Discuss its advantages.

(C.O.No.2) [Remember]

1. Discuss the roles of Pandas, NumPy, and Scikit-learn in the Python data science ecosystem.

(C.O.No.2) [Remember]

1. Describe various methods used in machine learning. Explain the key characteristics and applications

(C.O.No.2) [Remember]

1. Explain the concept of a correlation matrix plot and its significance in data analysis.

(C.O.No.3) [Apply]

1. Describe the data processing workflow in data analysis and machine learning. Outline the key steps involved.

(C.O.No.2) [Remember]

1. Describe the concept of Principal Component Analysis (PCA) and its significance in data analysis and machine learning.

(C.O.No.3) [Apply]

**Part C**

**Answer any Two Questions. (2Q x 20M = 40 M)**

1. Discuss the various applications of machine learning across different industries with specific examples of how machine learning is utilized in fields such as healthcare, finance, retail, transportation, and entertainment.

(C.O.No.1) [Understand]

1. Explain the role of data visualization in machine learning and how visualizations can be used throughout the machine learning pipeline, from data exploration and preprocessing to model evaluation and results presentation.

(C.O.No.2) [Remember]

1. Discuss the concept of linear regression and its application in predictive modeling. Explain the underlying assumptions and mathematical foundation of linear regression.

(C.O.No.3) [Apply]