School of Computing Science and Engineering

Bachelor of Science in Computer Science
Summer Term Examination – July - August 2024

Duration : 180 Minutes
Max Marks : 100

Sem VI - E1UP603B - Data Analysis and Handling

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1) What is predictive modeling? K1(2)

2) Describe the process of reading data from a CSV file into a DataFrame using Pandas. K2(4)

3) How do you handle categorical variables in predictive modeling, and why is it important? Explain. K2(6)

4) Build a data visual and exaplain how it adheres to principles of effective communication and visual design. K3(9)

5) Build an interactive data visual and explain how it encourages exploration and discovery? K3(9)

6) Determine the impact of interactivity on the engagement and comprehension of data visualizations among different user groups. K5(10)

7) Using transportation data, analyze traffic patterns and congestion hotspots to propose strategies for optimizing urban mobility and reducing commuting times. K4(12)

8) Determine a novel approach for integrating multiple predictive models into an ensemble to improve overall performance. K5(15)

9) Determine a novel framework for predictive modeling and optimization of renewable energy generation and consumption in smart grid systems to maximize energy efficiency and sustainability. Give example. K5(15)

10) Design a revolutionary data visualization framework that enables collaborative decision-making in virtual environments by allowing multiple users to interact with shared data visualizations in real-time, regardless of their physical location. K6(18)