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School of Computing Science and Engineering

Bachelor of Technology in Computer Science and Engineering

Mid Term Examination - May 2024

Duration : 90 Minutes

Max Marks : 50

Sem IV - R1UC402T - Data Analytics

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) Find the intercept of linear regression line if $\sum x = 30$, $\sum y = 27$, $\sum x^2 = 110$, $\sum xy = 190$ and $n = 4$. K2 (2)
- 2) Differentiate between regression modeling and Bayesian modeling K1 (3)
- 3) We have decided to use a neural network to solve this problem. We have two choices: either to train a separate neural network for each of the diseases or to train a single neural network with one output neuron for each disease, but with a shared hidden layer. Which method do you prefer? Justify your answer. K2 (4)
- 4) Compare Reporting and Analysis with its process K2 (6)
- 5) Define fuzzy logic and its importance in our daily life. What is role of crisp sets in fuzzy logic ? K3 (6)
- 6) When is Simple Exponential Smoothing procedure an optimal method to use? What values can the smoothing constant take on? What is the impact of various values of the smoothing constant on the smoothed time series? K3 (9)
- 7) Explain Bernoulli sampling with its algorithm. K4 (8)
- 8) What is the basic principle of a Support Vector Machine? Explain different types of kernel functions. K4 (12)

OR

Explain content-based filtering in detail. K4 (12)