

Assignment-4_DADV

Q.1 Explain the key differences between linear regression and logistic regression. In what types of problems is each method used?

Q.2 Given the following dataset, perform linear regression using Python to predict the dependent variable Y based on the independent variable X. Calculate the regression coefficients.

X	Y
1	2
2	3
3	5
4	7
5	11

Q.3 Describe the K-Means clustering algorithm. What are some common ways to determine the optimal number of clusters?

Q.4 What is a decision tree, and how is it used in classification tasks? Discuss the advantages and disadvantages of using decision trees.

Q.5 Given the following confusion matrix, calculate the accuracy, precision, recall, and F1-score.

	Predicted Positive	Predicted Negative
Actual Positive	50	10
Actual Negative	5	35

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Note: Submit the assignment on or before 25/09/2024.