

Q10 and Q15 are subjective answer type questions, Answer them in your own words briefly.

10. What do you understand by the term Normal Distribution?

Answer: The normal distribution also known as the Gaussian distribution or bell curve, is a probability distribution that is symmetric and bell-shaped. It is characterized by its mean and standard deviation. In a normal distribution, the data is evenly distributed around the mean, and the majority of the observations fall close to the mean with fewer observations in the tails. Many natural phenomena and statistical variables follow a normal distribution, making it a fundamental concept in statistics.

11. How do you handle missing data? What imputation techniques do you recommend?

Answer: When dealing with missing data, there are various imputation techniques that can be used to estimate or fill in the missing values. Some common imputation techniques include:

1. Mean imputation: Replace missing value with mean of the available data for that variable.

2. Median imputation: Replace missing value with the median of the available data for that variable.

3. regression imputation: Predict missing values based on a regression model using other variables.

4. Multiple imputation: Generate multiple plausible values for missing data based on statistical models.

12. What is A/B testing?

Answer: A/B testing also known as split testing, is a statistical technique used in experiments to compare two or more versions of a variable or treatment to determine which one performs better. It is commonly used in fields like marketing, web design and product development.

This testing helps in making data-driven decisions about which variation is more effective or optimal.

13. Is mean imputation of missing data acceptable practice?

Answer: Mean imputation means replace missing value with mean of the available data for that variable. Therefore mean imputation is generally considered a naïve approach and is not recommended as standalone imputation method.

14. What is linear regression in statistics?

Answer: Linear regression is a statistical method used to model and analyze the relationship between a dependent variable and one or more independent variables. It aims to find a linear equation that best fits the data and can be used to predict or explain the behaviour of the dependent variable based on the independent variable.



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