STATISTICS WORKSHEET- 6

Q1 to Q9 have only one correct answer. Choose the correct option to answer your question.

1. Which of the following can be considered as random variable?

   d) All of the mentioned

2. Which of the following random variable that take on only a countable number of possibilities?

   a) Discrete

3. Which of the following function is associated with a continuous random variable?

   a) pdf

4. The expected value or_____of a random variable is the center of its distribution.

   c) mean

5. Which of the following of a random variable is not a measure of spread?

   a) variance

6. The_____of the Chi-squared distribution is twice the degrees of freedom.

   a) variance

7. The beta distribution is the default prior for parameters between _____

   c) 0 and 1

8. Which of the following tool is used for constructing confidence intervals and calculating standard errors for difficult statistics?

   b) bootstrap

9. Data that summarize all observations in a category are called_____data.

b) summarized

Q10and Q15 are subjective answer type questions, Answer them in your own words briefly.

10. What is the difference between a boxplot and histogram?
11. How to select metrics?
12. How do you assess the statistical significance of an insight?
13. Give examples of data that doesnot have a Gaussian distribution, nor log-normal.
14. Give an example where the median is a better measure than the mean.
15. What is the Likelihood?

Q10 TO Q15 SUBJECTIVE ANSWER

10. Histograms are a special kind of bar graph that shows a bar for a range of data values instead of a single value. A box plot is a data display that draws a box over a number line to show the interquartile range of the data.

11. Good metrics are important to your company growth and objectives. Your key metrics should always be closely tied to your primary objective.

12. **Steps for Statistical Significance :-**
    - **A)** State the Research Hypothesis.
    - B) State the Null Hypothesis.
    - C) Select a probability of error level
    - D) Select and compute the test for statistical significance.
    - E) Interpret the results

13. **EXAMPLE OF DATA :-** Distributions of income, Distributions of house prices, Distributions of bets placed on a sporting event, These Distributions cannot have negative values.

14. Mean Formula :- $M = \frac{\text{SUM OF THE TERMS}}{\text{NUMBER OR TERMS}}$

Eg. $\frac{10+10+20+40+70}{5} = \frac{150}{5} = 30$

MEDIAN Formula:- Median = $[(n + 1)/2]^{th}$ term

Eg. $(5+1/2)^{th}$ term

3^{th} term = 20

15. The likelihood is the probability that a particular outcome is observed when the true value of the parameter is. equivalent to the probability mass on ; it is not a probability density over the parameter.


FLIP ROBO