

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?

- a) The outcome from the roll of a die
- b) The outcome of flip of a coin
- c) The outcome of exam
- d) All of the mentioned

Answer= All of the mentioned

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

- a) Discrete
- b) Non Discrete
- c) Continuous
- d) All of the mentioned

Answer= Discrete

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

- a) pdf
- b) pmv
- c) pmf
- d) all of the mentioned

Answer=pdf

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

- a) mode
- b) median
- c) mean
- d) bayesian inference

Answer= mean

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

- a) variance
- b) standard deviation
- c) empirical mean
- d) all of the mentioned

Answer=variance

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

- a) variance
- b) standard deviation
- c) mode
- d) none of the mentioned

Answer= variance

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

- a) 0 and 10
- b) 1 and 2
- c) 0 and 1
- d) None of the mentioned

Answer=0 and 1

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

difficult statistics?

- a) baggyer
- b) bootstrap
- c) jackknife
- d) none of the mentioned

Answer= bootstrap

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9. Data that summarize all observations in a category are called _____ data.

- a) frequency

- b) summarized
- c) raw
- d) none of the mentioned

Answer= summarized

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

10. What is the difference between a boxplot and histogram?

Answer= Boxplot and histogram are graphical representation for the frequency of numeric data values. Both histograms and box plots are used to explore and present the data in an easy and understandable manner. Histograms are preferred to determine the underlying probability distribution of a data. Box plots on the other hand are more useful when comparing between several data sets. They are less detailed than histograms and take up less space, histogram gives a count column and also give bins. boxplot gives you a third column HUE for take a extra data

11. How to select metrics?

Answer= which metrics you need to track, you have to first think about what goals you want to achieve from the data. For instance, if your aim is to reduce the time spent on projects, you should focus on metrics related to time, project scheduling and productivity. ...

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.

Answer= When a distribution is skewed, the median does a better job of describing the center of the distribution than the mean for example distribution of salary for a employee in certain branch is possible to capturing the typical salary for particular branch

15. What is the Likelihood?

Answer= In statistics, the likelihood function (often simply called the likelihood) measures the goodness of fit of a statistical model to a sample of data for given values of the unknown parameters.