FLIP ROBO

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
   ANS:- D) 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
   ANS:- A) 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
   ANS:- A) 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
   ANS:- C) 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
   ANS:- A) 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
   ANS:- B) standard deviation

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
   ANS:- C) 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) jacknife
   d) none of the mentioned

ANS:- B) BOOTSTRAP

9. Data that summarize all observations in a category are called_____data.
   a) frequency
   b) summarized
   c) raw
   d) none of the mentioned
      ANS:- d) none of the mentioned

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

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

ANS:- Well Box plot and Histogram can be used use Seaborn . where Box plot is Used using .boxplot and Histogram is used using .countplot. Box plot - gives the quartiles and indicate the median data to compare easilyHistogram - gives only the count

11. How to select metrics?
    ANS:- The key point is to choose metrics that clearly indicate where you are now in relation to your goals. Good metrics can be improved. Good metrics measure progress, which means there needs to be room for improvement.

12. How do you assess the statistical significance of an insight?
ANS:- Steps in Testing for Statistical Significance
   1. **State the Research Hypothesis.**
   2. **State the Null Hypothesis.**
   3. **Select a probability of error level (alpha level)**
   4. **Select and compute the test for statistical significance.**
   5. **Interpret the results.**

13. Give examples of data that doesnot have a Gaussian distribution, nor log-normal.
    ANS:- Exponential distributions do not have a log-normal distribution or a Gaussian distribution. In fact, any type of data that is categorical will not have these distributions as well. Example: Duration of a phone car, time until the next earthquake, etc.

14. Give an example where the median is a better measure than the mean.
    ANS:- For the data 154.9 cm, 162.8 cm, 170.6 cm, 158.8 cm, 163.3 cm, 166.8 cm, 160.2 cm, the mean is an appropriate measure of central tendency whereas, for the data 48, 59, 46, 52, 54, 46, 97, 42, 49, 58, 60, 99 the mean is not an appropriate measure of central tendency, but the median is an appropriate measure of central tendency.

15. What is the Likelihood?
    ANS:- As the earlier statement suggests, we call this term "likelihood" and the approach taken by Fin is that of maximising the likelihood (maximum likelihood). Likelihood refers to the probability of observing the data that has been observed assuming that the data came from a specific scenario.