STATISTICS WORKSHEET-3

1. Which of the following is the correct formula for total variation?

b) Total Variation = Residual Variation + Regression Variation

2. Collection of exchangeable binary outcomes for the same covariate data are called outcomes

c) binomial

3. How many outcomes are possible with Bernoulli trial?

a) 2

4. If Ho is true and we reject it is called

a) Type-I error

5. Level of significance is also called:

b) Size of the test

6. The chance of rejecting a true hypothesis decreases when sample size is:

b) Increase

7. Which of the following testing is concerned with making decisions using data?

b) Hypothesis

8. What is the purpose of multiple testing in statistical inference?

d) All of the mentioned

9. Normalized data are centred at and have units equal to standard deviations of the original data

a) 0

10. What Is Bayes' Theorem?

The Bayes Theorem states that the likelihood of the second event given the first event multiplied by the probability of the first event equals the conditional probability of an event depending on the occurrence of another event.

The Bayes theorem provides a method for calculating a hypothesis' probability based on its prior probability, the probabilities of observing different types of data given the hypothesis, and the seen data itself. The Bayes theorem provides a method for calculating a hypothesis' probability based on its prior probability, the probabilities of observing different types of data given the hypothesis, and the seen data itself.

The Bayes theorem is a mathematical formula that is used in statistics to calculate the conditional probability of events. The Bayes theorem basically describes the likelihood of an event based on knowledge of potentially relevant conditions in advance.

11. What is z-score?

You can plot a z-score on a normal distribution curve. The range of Z-scores ranges from -3 standard deviations (which would be on the far left of the normal distribution curve) to +3 standard deviations (which would fall to the far right of the normal distribution curve)

12. . What is t-test?

A t-test is an inferential statistic used to evaluate whether there is a significant difference between the means of two groups and their relationships. When the data sets have unknown variances and a normal distribution, t-tests are used.

In order to evaluate statistical significance, a test used for hypothesis testing in statistics, uses the t-statistic, the values of the t-distribution, and the degrees of freedom.

13. What is percentile?

The value below which a specific percentage falls is referred to as the percentile.

Percentile = (n/N) × 100

14. What is ANOVA?

An Analysis of Variance test is a type of statistical analysis that checks for variance-based mean differences to see if there is a statistically significant difference between two or more categorical groups.

The independent variable is divided into two or more groups by ANOVA, which is another important component.

15. How can ANOVA help?

An ANOVA test is a way to test for mean differences using variance to determine whether survey or experiment results are significantly different between two or more category groups.

When examining three or more variables, an ANOVA is useful. It resembles multiple two-sample t-tests. But it produces fewer type I errors and is suitable for a variety of problems. ANOVA includes dispersing the variation among many sources and groups differences by comparing the means of each group. It is used with test groups, subjects, as well as between and within groups.