WORKSHEET SET 3

STATISTICS

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

Answer. B. Total Variation = Residual Variation + Regression Variation

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

Answer. C. Binomial

3. How many outcomes are possible with Bernoulli trial?

Answer. B. 2

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

Answer. A. Type I error

5. Level of significance is also called:

Answer. B. Size of the Test

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

Answer. B. Increase

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

Answer. B. Hypothesis

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

Answer. D. All of the Mentioned

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

Answer. A. 0

10. What Is Bayes' Theorem?

Answer. A theorem describing how the conditional probability of each of a set of possible causes for a given observed outcome can be computed from knowledge of the probability of each cause and the conditional probability of the outcome of each cause.

11. What is z-score?

Answer. A z-score describes the position of a raw score in terms of its distance from the mean, when measured in standard deviation units. The z-score is positive if the value lies above the mean, and negative if it lies below the mean.

12. What is t-test?

Answer. A t-test is an inferential statistic used to determine if there is a significant difference between the means of two groups and how they are related. T-tests are used

when the data sets follow a normal distribution and have unknown variances, like the data set recorded from flipping a coin 100 times. The t-test is a test used for hypothesis testing in statistics and uses the t-statistic, the t-distribution values, and the degrees of freedom to determine statistical significance.

13. What is percentile?
Answer. A percentile (or a centile) is a measure used in statistics indicating the value below which a given percentage of observations in a group of observations fall. For example, the 20th percentile is the value (or score) below which 20% of the observations may be found.

14. What is ANOVA?
Answer. Analysis of variance (ANOVA) is an analysis tool used in statistics that splits an observed aggregate variability found inside a data set into two parts: systematic factors and random factors. The systematic factors have a statistical influence on the given data set, while the random factors do not. Analysts use the ANOVA test to determine the influence that independent variables have on the dependent variable in a regression study.

15. How can ANOVA help?
Answer. ANOVA is helpful for testing three or more variables. It is similar to multiple two-sample t-tests. However, it results in fewer type I errors and is appropriate for a range of issues. ANOVA groups differences by comparing the means of each group and includes spreading out the variance into diverse sources.