

STATISTICS WORKSHEET-3

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

Ans: Option b) : Total Variation = Residual Variation + Regression Variation

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

Ans: Option c): binomial

3. How many outcomes are possible with Bernoulli trial?

Ans: Option A: 2

4. If H_0 is true and we reject it is called

Ans: Option a) Type-I error

5. Level of significance is also called

Ans: Option a) Power of the test

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

Ans: Option b) Increase

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

Ans: Option b) Hypothesis

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

Ans: Option d) All of the mentioned

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

Ans: Option a) 0

10. What Is Bayes' Theorem?

Ans: Bayes theorem states that the conditional probability of an event, based on the occurrence of another event is equal to the likelihood of the second event given the first event multiplied by the probability of first event.

11. What is z-score?

Ans: Z score indicates how much a given value differs from the standard deviation. It is the number of standard deviations a given point lies above or below mean. Z score is used in removing outliers in machine learning models, such that if $zscore=3$ then it means it covers 99% of the data and the datapoints outside that limit are discarded as they are considered outliers.

12. What is t-test?

Ans: A ttest is a statistical test that is used to compare the means of two groups. There are 2 types of ttest, one tail test and 2 tail test.

13. What is percentile?

Ans: A percentile is a comparison score between a particular score and the scores of the rest of a group.

14. What is ANOVA?

Ans: Anova is the method to find out if experimental results are significant. One way ANOVA compared 2 means from 2 independent groups using only one independent variable while 2 way ANOVA is the extension of one way ANOVA using 2 independent variables to calculate the main effect of interaction effect.

15. How can ANOVA help?

Ans: The ANOVA can help you know whether or not there are significant differences between the means of your independent variables, when you understand the difference of mean than others, you begin to understand which features has a relation with your dependent variables