

STATISTICS WORKSHEET-3

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

- a) Total Variation = Residual Variation – Regression Variation
- b) Total Variation = Residual Variation + Regression Variation**
- c) Total Variation = Residual Variation * Regression Variation
- d) All of the mentioned

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

- a) random
- b) direct
- c) binomial**
- d) none of the mentioned

3. How many outcomes are possible with Bernoulli trial?

- a) 2**
- b) 3
- c) 4
- d) None of the mentioned

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

- a) Type-I error**
- b) Type-II error
- c) Standard error
- d) Sampling error

5. Level of significance is also called:

- a) Power of the test
- b) Size of the test**
- c) Level of confidence

d) Confidence coefficient

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

a) Decrease

b) Increase

c) Both of them

d) None

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

a) Probability

b) Hypothesis

c) Causal

d) None of the mentioned

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

a) Minimize errors

b) Minimize false positives

c) Minimize false negatives

d) All of the mentioned

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

a) 0

b) 5

c) 1

d) 10

10. What Is Bayes' Theorem?

Ans: Bayes Theorem is a useful tool in applied machine learning. It provides a way of thinking about the relationship between data and a model

11. What is z-score?

Ans: A Z-Score is a statistical measurement of a score's relationship to the mean in a group of scores. A Z-score can reveal to a trader if a value is typical for a specified data set or if it is atypical.

12. What is t-test?

Ans: A *t*-test is the most commonly applied when the test statistic would follow a normal distribution if the value of a scaling term in the test statistic were known.

13. What is percentile?

Ans: In statistics, a percentile is a term that describes how a score compares to other scores from the same set. While there is no universal definition of percentile, it is commonly expressed as the percentage of values in a set of data scores that fall below a given value.

14. What is ANOVA?

Ans: 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.

15. How can ANOVA help?

Ans: ANOVA can help to identify the sources of variation in a data set. This can help to improve the accuracy of data predictions and analyses. Additionally, ANOVA can help to identify relationships between different variables in a data set.