STATISTICS WORKSHEET-1

WORKSHEET

Q1 to Q9 have only one correct answer. Choose the correct option to answer your question.

1) A
2) A
3) B
4) A
5) C
6) A
7) B
8) A
9) A

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

10)

Ans A normal distribution is a probability distribution that describes how data is distributed around a mean, with most values clustering in the middle and tapering off towards the extremes.

11)

Ans: imputation or data removal can handle missing data.

Replacing missing values with the mean or median values of the dataset at large, or some similar summary statistic.

12)

Ans A method for comparing two versions of a product or website to determine which one performs better

Some examples of how to testing can be used:

Testing a sales pages: compare a current sales page with a new version that addresses objections.

Testing a call to action: Test the copy, design, and color of a call to action button to see what works best

Testing a user interface: compare two variations of a new user interface to see which one receives the most user engagement.

13)

Ans: No it does not acceptable practices imputation pf missing data.

14)

Ans: linear regression is a statistical analysis technique that uses a linear equation to predict value of an unknown variable based on a known variable.

➢ Explanation

linear regression models the relationship between a dependent variable and an independent variable as a straight line. The equation for a linear regression line is $Y=aX+b$, where Y is the dependent variable, X is the independent variable, a is the slope, and b is the independent variable, a is the slope, and b is the Y- intercept.

➢ Purpose

linear regression can be used to predict missing values, also known as interpolation. It can also be used to fore cast trends and vales, such as predicting the price of gold in six months.

➢ Example

For example if we have data on our income & expenses from last year, we can use linear regression to determine that we expenses are half our income, then we can use this information to calculate on known future expense by having a future known income .

➢ Types

There are different types of linear regression including simple, multiple, logistic, ordinal & multinomial.

15)

Ans There are two main branches of statistics they are:

1) Descriptive statistics.
2) Inferential statistics.

Descriptive statistics: involve gathering and organizing data for analysis and presentation.

Inferential statistics: involves drawing conclusions , generalizations, or making predictions.

PYTHON – WORKSHEET 1

Q1 to Q8 have only one correct answer. Choose the correct option to answer your question.

1) C
2) B
3) A
4) C
5) C
6) C
7) A
8) C
9) C
10) D

MACHINE LEARNING

In Q1 to Q11, only one option is correct, choose the correct option:

1) A
2) A
3) B
4) A
5) C
6) B
7) D
8) D
9) D
10) B
11) B

12) A &B

Q13 and Q15 are subjective answer type questions, Answer them briefly.

13)

Ans: The act of changing a situation or system so that it follows laws or rules, or is based on reason. They are demanding They higher wages and the regularization of their working conditions. The regularization of undocumented workers.

Role of Regularization are :

1) Complexity control.
2) Preventing overfitting.
3) Balancing Bias &variance
4) Feature selection
5) Handling multicollinearity
6) Generalization

14)

Ans: Lasso Regression particular algorithms are used for regularization. A regression model which we uses the L1 Regularization technique is called Lasso (Least Absolute shrinkage and selection operator) regression.

15)

Ans An error term represents the margin of error within a statistical model; it refers to the sum of the deviations within the regression line, which provides an explanation for the difference between the

theoretical value of the model and the actual observed results.