Internship- Statistics

Question.1-A True

2-A-central limit theorem

3-b.Modeling bounded count data

4-d. All of the mentioned above

5-c. poisson

6-b.False

7-b.hypothesis

8-a.0

9-c.outliers cannot conform to the regression relationship

10- A normal distribution is the continuous probability distribution with a probability density function that gives you a symmetrical bell curve. Simply put, it is a plot of the probability function of a variable that has maximum data concentrated around one point and a few points taper off symmetrically towards two opposite ends.

normal distribution has a probability distribution that is centered around the mean. This means that the distribution has more data around the mean. The data distribution decreases as you move away from the center. The resulting curve is symmetrical about the mean and forms a bell-shaped distribution

12- A/B tests, also known as split tests, allow you to compare 2 versions of something to learn which is more effective. The concept is similar to the scientific method. If you want to find out what happens when you change one thing, you have to create a situation where only that one thing changes.

Like if I put 2 seeds in 2 cups of dirt and put one in the closet and the other by the window, you'll see different results. This kind of experimental setup is A/B testing.

14- Linear regression attempts to model the relationship between two variables by fitting a linear equation to observed data. One variable is considered to be an explanatory variable, and the other is considered to be a dependent variable. For example, a modeler might want to relate the weights of individuals to their heights using a linear regression model.

A linear regression line has an equation of the form $\boldsymbol{Y = a + bX}$, where $\boldsymbol{X}$ is the explanatory variable and $\boldsymbol{Y}$ is the dependent variable. The slope of the line is $\boldsymbol{b}$, and $\boldsymbol{a}$ is the intercept (the value of $\boldsymbol{y}$ when $\boldsymbol{x} = 0$).

15- The two main branches of statistics are descriptive statistics and inferential statistics

Descriptive statistics deals with the collection of data, its presentation in various forms, such as tables, graphs and diagrams and finding averages and other measures which would describe the data.**example** Industrial statistics, population statistics, trade statistics, etc. Businessmen make use of descriptive statistics in presenting their annual reports, final accounts, and bank statements.

Inferential statistics deals with techniques used for the analysis of data, making estimates and drawing conclusions from limited information obtained through sampling and testing the reliability of the estimates.

Like example we want to have an idea about the percentage of the illiterate population of our country. We take a sample from the population and find the proportion of illiterate individuals in the sample. With the help of probability, this sample proportion enables us to make some inferences about the population proportion. This study belongs to inferential statistics.