BWT WEEK 1

TASK 3
SHERAZ BIN TAHIR

4th sub-topic

In the 4th subtopic, i have learned about probability, random variables, probability distribution, mean, variance and standard deviation, mode, median and quartiles, real-world data, normal distribution, confidence intervals, hypothesis testing, covariance, and correlation.

Here i am going to define each concept related to the statistics given.

Probability - a number between 0 and 1 that expresses how likely an event is.

Random variables - variables that can take on different values with known probabilities.

Probability distributions - the probability of each possible value for a random variable.

Mean - average,

Variance - the spread of the data

Standard deviation - square root of variance

Median - middle value

Quartiles - which divide the data into four equal parts

Confidence intervals - It allow us to estimate the true population mean given our sample, with a certain probability (or level of confidence).

Hypothesis testing - a formal way to test claims about data. The central limit theorem states that the mean of a large number of independent random variables, regardless of the original distribution, is approximately normally distributed.

Covariance - measures the linear relationship between two variables

Correlation - measures of the strength of this relationship.