**MACHINE LEARNING ASSIGNMENT – 3**

**1.(d)**

**2.(d)**

**3.(c)**

**4.(b)**

**5.(d)**

**6.(c)**

**7.(d)**

**8.(a)**

**9.(a)**

**10.(b)**

**11.(a)**

**12.(b)**

**STATISTICS WORKSHEET-3**

**1.(b)**

**2.(c)**

**3.(a)**

**4.(a)**

**5.(c)**

**6.(b)**

**7.(b)**

**8.(d)**

**9.(a)**

**10.** In statistics and probability theory, the Bayes’ theorem (also known as the Bayes’ rule) is a mathematical formula used to determine the conditional probability of events. Essentially, the Bayes’ theorem describes the probability of an event based on prior knowledge of the conditions that might be relevant to the event.

**12.** Z score is also known as a standard score and is used to represent the number of standard deviations by which a raw score is above or below the mean. A z score is usually used as part of a z test to draw interpretations about population data. This score helps to compare data from different normal distributions.

A z score can be positive, negative, or zero depending upon the position of the raw score with respect to the mean. To determine a z score the knowledge of the population mean and the standard deviation is required. In this article, we will learn more about a z score, its formula, and how to calculate it**.**

**13.** A t-test is a type of inferential statistic used to determine if there is a significant difference between the means of two groups, which may be related in certain features. It is mostly used when the data sets, like the data set recorded as the outcome from flipping a coin 100 times, would follow a normal distribution and may have unknown variances. A t-test is used as a hypothesis testing tool, which allows testing of an assumption applicable to a population.

**14.** each of the 100 equal groups into which a population can be divided according to the distribution of values of a particular variable.

**15.** 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. The systematic factors have a statistical influence on the given data set, while the random factors do not. Analysts use the ANOVA test to determine the influence that independent variables have on the dependent variable in a regression study.

**16.** ANOVA is helpful for testing three or more variables. It is similar to multiple two-sample t-tests. However, it results in fewer type I errors and is appropriate for a range of issues. ANOVA groups differences by comparing the means of each group and includes spreading out the variance into diverse sources**.**