STATISTICS WORKSHEET- 6

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

1. Which of the following can be considered as random variable?

ANS-All of the mentioned

1. Which of the following random variable that take on only a countable number of possibilities?

ANS-Discrete

1. Which of the following function is associated with a continuous random variable?

ANS-pdf

1. The expected value or of a random variable is the center of its distribution.

ANS-mean

1. Which of the following of a random variable is not a measure of spread?

ANS-empirical mean

1. The of the Chi-squared distribution is twice the degrees of freedom.

ANS-variance

1. The beta distribution is the default prior for parameters between

ANS-0 and 1

1. Which of the following tool is used for constructing confidence intervals and calculating standard errors for difficult statistics?

ANS-bootstrap

1. Data that summarize all observations in a category are called data.

ANS-frequency

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

1. What is the difference between a boxplot and histogram?

ANS-Histograms indicate the whole frequency distribution of a variable, whereas the boxplot summarises its most prominent features. These features include median and spread as well as the extent and nature of departures from symmetry, and the possible presence of observations having extreme values (outliers).

1. How to select metrics?

ANS- Some steps to choose metrics-

Define the goals-determine wthat to Aachieve

Define KPIs

Choose metrics that are actionable

Avoid Vanity metric

Continuously review and refine

1. How do you assess the statistical significance of an insight?

ANS- To Assess the statistical significance of an insight,need to choose appropriate statistical test,set the significance level,compute the p\_value,interpret the results and consider the effect size

1. Give examples of data that doesnot have a Gaussian distribution, nor log-normal.

ANS- Any distribution of money or value will be non--Gaussian. For example: distributions of income; distributions of house prices; distributions of bets placed on a sporting event. These distributions cannot have negative values and will usually have extended right hand tails.

1. Give an example where the median is a better measure than the mean.

ANS-Income is the classic example of when to use the median instead of the mean because its distribution tends to be skewed.

1. What is the Likelihood?

ANS-Likelihood, being the outcome of a likelihood function thus defined, describes the plausibility, under a certain statistical model (the null hypothesis in hypothesis testing), of a certain parameter value after observing a particular outcome.

