Simulation Lab(MC503)

Assignment-2

Try to solve all the problems

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1. In R, iris dataset is already available under MASS library. Use iris dataset, find the following things:

   i. Find the number of row and column of iris dataset.

   ii. Find the summary of Sepal.Length and Sepal.Width variable

   iii. Find the types of species and its number.

   iv. Make a another dataset from iris dataset with size of Petal.Length is grater than 2.

2. Create a your own dataset with 5 row and 4 column in R and save this dataset in your system. This dataset must contain at least one categorical variable and one numeric variable(You may take any type of dataset).

3. Use summary function for the following dataset to find the outlier, if any. Also, create a data frame after removing this outlier. Also, add one column for sum of these vectors i.e. $X_1 + X_2 + X_3$.

X_1= (2,4,6,10,4,7,12,20,5)
X_2= (10,5,5,20,4,70,40,12)
X_3= (2,4,2.5,34,1.6,9.5,6,2)

4. Let's say you work for a retail company, and you want to create a data frame and draw a bar chart to visualize your monthly sales data for the past year, broken down by product categories. You have the data for each month is looks like this:

Months	January	February	March	April
Category A	$5,000	$4,500	$5,200	$2,100
Category B	$3,000	$3,200	$3,100	$1,500
Category C	$2,000	$2,300	$1,800	$3,015

5. Imports medals_total.csv dataset and find the following things as below.

   i. Total number of gold, silver and bronze model won by India, USA and China.

   ii. Make two separate bar charts for all three types of medals won by China and UK.

   iii. Filter the dataset only for five countries as India, USA, Japan, China and Brazil.

   iv. Use the dataset obtained in (iii) and make a pie chart and label them.

   v. Find the details of all countries getting at least two golds, five silver and two bronze medals.

6. Use AirPassengers dataset, which is already available in R and find the following things:

   i. Find the total number of passengers who travelled from 1949 to 1960.

   ii. store this AirPassengers dataset in a other dataset and draw a scatter plot between year and number of passengers.

   iii. Create a boxplot of the number of passengers for each months during entire duration.

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