भारतीय सूचना प्रौद्योगिकी संस्थान गुवाहाटी

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY GUWAHATI

Data Analytics Lab, M.Tech 3rd Semester

Instructions

1. Upload all your codes to Github.
2. You will be called randomly to explain the code based on which marks/grade will be assigned.

Assignment -3

1. Get the iris dataset from UCI ML Repository (https://archive.ics.uci.edu/ml/datasets/iris) and perform the following visualization tasks:
   (a) Create Bar Plots to show the comparison between cumulative totals across ”Petal Length”.
   (b) Load the package RColorBrewer and create stacked bar plot to show the comparison between cumulative totals across ”Species” and ”Petal Length”. The RColorBrewer package is normally used to manage colors with R
   (c) Create box plot. Visualize how the spread (of Sepal Length) is across various categories (of Species). Fill all the box plots with different color palettes. A color palette is a group of colors that is used to make the graph more appealing.
   (d) Create a scatter plot with Species along the Y axis and Petal Length along the X axis.
2. Get the data (PAICOL.csv) and import it with the function read.csv. The dataset comprises of the daily levels of a river and the rainfall data from the basin. Replace the value of DATE with formatted dates and then display the summary of the data using the function summary(). Load ggplot package and visulaize the following using ggplot functions:
   (a) Create a line plot of the attribute ’LEVEL’.
   (b) Create a scatter plot of the ’RAIN’ against ’LEVEL’.
   (c) Create a plot of the RAIN and LEVEL.
   (d) Find and plot circles on the LEVEL plot at the maximum and minimum value.
   (e) Plot the LEVEL for the year “2001.”
3. Simulate a simple dataset of 10 points.Create a heat map to visualize relationships between the variables. A heat map is agraphical representation of data where the data values are represented as colours.
4. Creating a sample of 100 numbers which are incremented by 1.5. Create the binomial distribution and plot it using dotchart.