

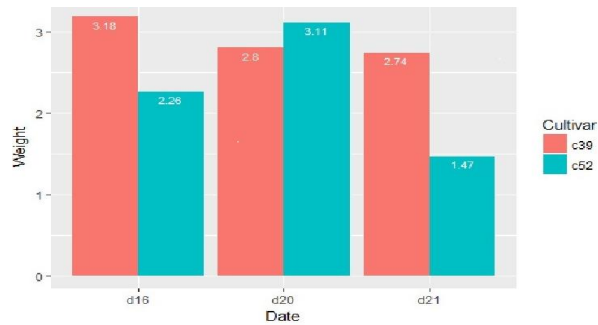
DATA SCIENCE USING R

PROGRAM LIST

7th Semester Sep-Dec 2020

1.
 - a) Import a CSV file, summarize the file and plot any two numeric columns of the file.
 - b) Import a CSV file using `read.delim ()` function and add a suitable column of suitable name. Export this file which was modified as tab delimited without row names.
2. Below we have results of a simple experiment to look at the visitation of various bee species to different plants. The number of bees observed was as follows.
 - i) Buff Tail: 10 1 37 5 12
 - ii) Garden bee: 8 3 9 6 4
 - iii) Red Tail: 18 9 12 4
 - iv) Carder bee: 8 27 6 32 23
 - iv) Honey Bee: 12 13 16 9 10

Make five simple numeric vectors of these data. Next join the bee vectors together to make a data frame. Each row of the resulting frame relates to specific plant, the plant names are Thistle, Vipers, Golden Rain, Yellowwattle and blackberry. Use these names to create row labels for the data.
3.
 - a) Create a matrix object from the data that is given in the above question 2. Make a List using the plant names from above as an object to include in the list along with the original data.
 - b) Create a List of data objects of type Numeric, String, Real Numbers and name them.
4.
 - a) Using the dataset `Cabbage_Exp` (imported from library `gcookbook`) create a bargraph as shown below for the cultivar field of `Cabbage_Exp`



- b)** Create a BoxPlot using the dataset *BirthWt* (import from library *gcookbook*) with the x axis as *ageyear* and y axis as *height*.

5.
 - a) Create a dotchart from the *Mtcars* which is loaded from *ggplot2* package. Plot the Y axis by naming the different types of Mtcars against MPG values against x-axis
 - b) Create a Scatterplot using the data frame *Height weight* (import from library *gcookbook*) with the x-axis as *ageyear* and y-axis as *height*

6. Perform a K-Means clustering model by importing a suitable data set and show the results on R console.

7. Perform a Linear Regression Model by creating or importing a suitable dataset and plot the model using graphics package on R console.

8. Perform a Naïve Bayes classification model by importing a suitable data set and show the results on R console.

9. Perform a Decision Tree classification model by importing a suitable data set and plot the model using graphics package on R console.

10. Display and perform multivariate data matrix plots in one window.