Module: Basic graphics

Jan-Feb-Mar 2018
CCHE -57357

EXERCISE

Basic graphics (line & bar)

The excel file 'CAD' contains data about the lipid profile of patients with coronary artery disease (CAD) and normal controls

Draw a **line graph** showing the difference in HDL and LDL values between patients and controls through following the steps below:

1. Read the excel sheet called CAD in R. Name it in R as "lipid"

2. Identify the minimum and maximum of LDL and HDL and state the lowest minimum of both and the highest max of both

3. From "lipid", subset a file containing patients only and name it "patients" and a file containing controls only and name it "controls"

4. Set your plotting panel to two plots in one **row**

5. Draw plot 1 for LDL of patients with the following characters
    a. As dots overlaid with lines
    b. Coloured red
    c. Dot shape is a triangle
    d. Y-axis label is "mg/dl" , no x-axis label
    e. The y axis limits
        i. starts from (lowest min – 5) i.e. subtract 5 from the lowest min
        ii. to (highest max + 100) i.e. add 100 to the highest max

    Add a line showing HDL of patients with the following characters

a. As dots overlaid with lines
b. Coloured blue
c. Dot shape is a square

Add a title called 'CAD patients'. Make it italic but not bold.

Add a legend box in the "'topright" of the graph with a box size of 0.6 containing the appropriate labels, colours and shapes.

6. Draw plot 2 exactly as plot 1 but for LDL and HDL of controls and make its title 'Normal controls'

NB: The 2 plots should be displayed beside each other, what do you observe?

Draw a **bar chart** showing the difference in lipid profile values between patients and controls through following the steps below:

1. From the file called 'patients', subset LDL, HDL, TC and TG in a new file called "patientbar"

2. From the file called 'controls', subset LDL,HDL,TC and TG in a new file called "controlbar"

3. Set your plotting panel to two plots in one **column**

4. Draw plot 1 for the 'patientbar' data with the following characters
   a. Bars beside each other
   b. Coloured purple
   c. Y axis is from 0 to 300 with 3 divisions
   d. Y axis title is "Blood level (mg/dl)"

e. X-axis title is “Lipid type”
f. Title of the graph is “Patients”

5. Draw plot 2 for the ‘controlbar’ data with the same characters as plot 1 but colour is green and title is “Controls”

   NB: The 2 plots should be displayed one below the other, what do you observe?