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Practical-6

Aim; -

Produce Stratified Boxplots, Histograms and Scatterplots using

Theory :-

Stratified Boxplot in R

A box plot is a graphical representation of groups of numerical data through their quartiles. Box plots are non-parametric that they display variation in samples of a statistical population without making any assumptions of the underlying statistical distribution. The spacings between the different parts of the box in a bloxplot indicate the degree of dispersion and skewness in the data and show outliers. Boxplot can be drawn either vertically or horizontally. Boxplot got their name from the box in the middle. Stratified boxplots are used to examine the relationship between a categorical and a numeric variable, between strata or groups defined by a third categorical and a numeric variable, between third categorical variable. Stratified Boxplots are useful when it comes to comparing categorical variables

Syntax:
boxplot (formula, data = NULL, ..., subset, na. action = NULL,

xlab = mklab (y-var = horizontal), ylab = mklab (y-var=!horizontal)

add = FALSE, ann = ! add, horizontal = FALSE, drop = FALSE,

sep = ec. " lex. order = FALSE)

boxplot (x, ..., range = 1.5, width = NULL, varwidth = FALSE, notch = FALSE, notc

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Date	

	col= NULL, log=ee 19, par8 = list(bowex = 0.8, staplewer = 0.8)		
	outwex= o.s), ann = ! add, horizontal = false, add = False att = No.		
		1 Description	
	Parameter		
1)	Formula	a formula	
	data	a data frame list from which the variable	
3)	subset	An optional vector specifying a subset of	
	Manish As as	Observations	
4)	na, action	A function which indicates what should	
	I sa proposition in a	happen when the data contains HA.	
_ 5)	xlab, ylab	x-axis and y-axis annotation. Can be	
	70	Suppressed by ann = FALSE.	
_ 6)	add	logical, if true add boxplot to the cum	
_	LO DELL'ARE	Olot.	
7)	ann	logical indicating if axe should be annotated (by xlab and ylab).	
		annotated (by xlab and ylab).	
8)	horizontal	logical indicating if the boxplots show	
		logical indicating if the boxplots show horizontal; defaut FALSE means vertical	
	to buy landingerin	boxes.	
9)	X	Either a numeric vector or a single li	
	IN CONTRACTOR	containing such vectors	
10)	range	this determines how far the plot whi	
	0	extend out from the box.	
_ (1)	width	a vector giving the relative with of	
12)	Now 0,110	boxes making up the plot.	
12)	Varwidth	if varwidth is TRUE the boxes are	
		with widths proportional to the square-	
42)	notch	of the number of observations in the gr	
13)	110131	if the notch is TRUE, a notch is dra	
		in each side of the boxee.	

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Histograms in R

A histogram contains a rectangular area to display the statistical information which is proportional to the numerical intervals. A graphical representation that manages a group of data points into different speatied ranges. It has a special feature which shows no gaps between the bars and is similar to a vertical bar graph. We can create histogram in a programming language

syntax: - hist (v, main, xlab, xlim, ylim, breaks, col, border

Parameters: -

v: - This parameter contains numerical values used in histogram

main; - This parameter main is the title of the chart.

col: - This parameter is used to set color of the base

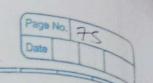
2 lab; - This parameter is the label for horizontal assis

border; - This parameter is used to set border color each borr.

xlim: - This parameter is used for plotting values of x-ans

ylim; - This parameter is used for plotting values of y-mile

breaks: - This parameter is used as with of each berr



A scatter plot is a set of dotted points to represent ind

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pieces of data in the horizontal and vertical axis. A gray

pieces of data in the horizontal and vertical axis. A gray

which the values of two variables are plotted along x

which the values of two variables are points reveals

Y-axis, the pattern of the resulting points reveals between them.

We can create a scatter plot in & frogramming Language using the plot () function. R- Scatter plots Syntax: - plot (x, y, main, xlab, ylab, xlim, ylim, axe)

Parameters:-

- z: This parameter sets the horizontal coordinates
- 4:- This parameter sets the vertical coordinates
- xlab: This parameter is the label for horizontal axis
- ylab: This parameter is the label for vertical quis.
- main; mis parameter main is the title of the chart
- xlim: mig parameter & used for plotting values of &
- yim: This parameter is used for plotting values of y
- ance: This parameter indicates whether both axes should be drawn on the plot.

