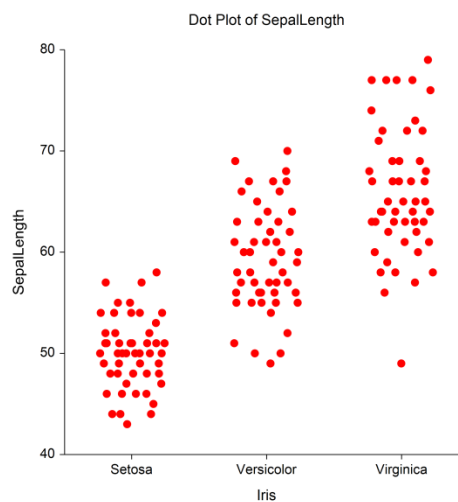


Chapter 150

Dot Plots

Introduction

When analyzing data, you often need to study the characteristics of a single group of numbers, observations, or measurements. You might want to know the center and the spread about this central value. You might want to investigate extreme values (referred to as outliers) or study the distribution or pattern of the data values. Several plots are available to allow you to study the distribution. One such plot is the dot plot.



Dot Plot Definition

Dot plots are plots of points with the measured value on one axis and the category level on the other axis.

Data Structure

A dot plot is constructed from a numeric variable. A second variable may be used to divide the first variable into groups (e.g., age group or gender). In the two-factor procedure, a third variable may be used to divide the groups into subgroups.

Dot Plot Window Options

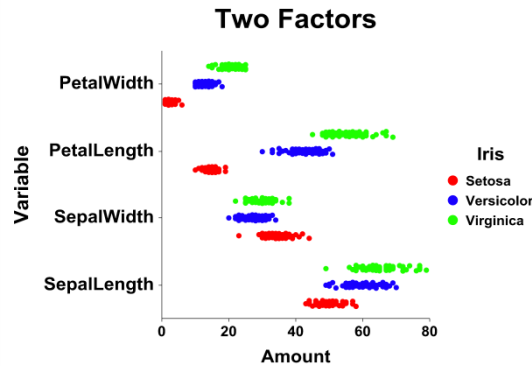
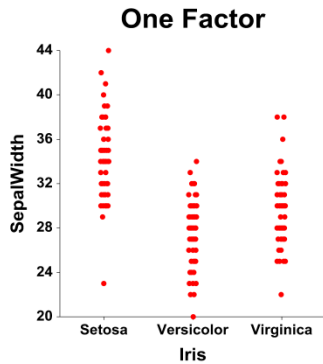
This section describes the specific options available on the Dot Plot window, which is displayed when the Dot Plot button is clicked. Common options, such as axes, labels, legends, and titles are documented in the Graphics Components chapter.

Dot Plot Tab

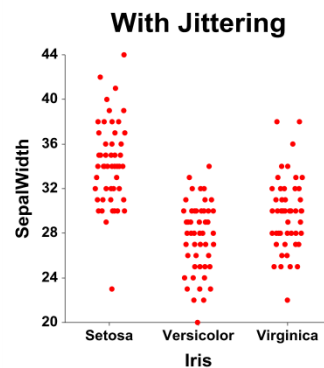
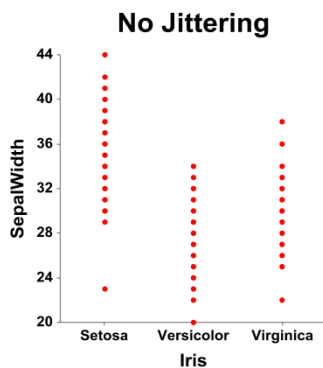
Dots Section

You can modify the color of the dots and the jittering in this section. The amount of jittering is specified under the Layout tab.

Number of Factors



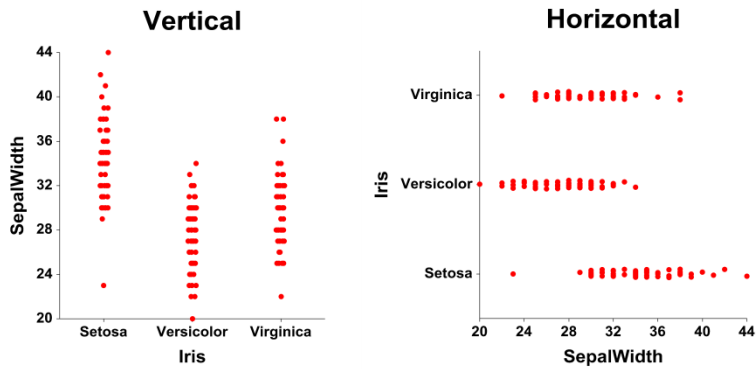
Jittering



Layout Tab

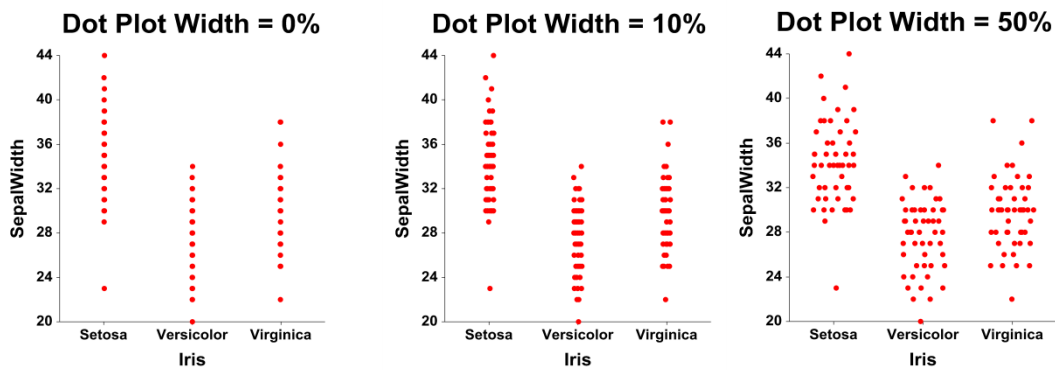
Orientation Section

You can orient the dot plot vertically or horizontally.



Object Spacing and Size Section

You can change the amount of jittering by changing the Dot Plot Width.

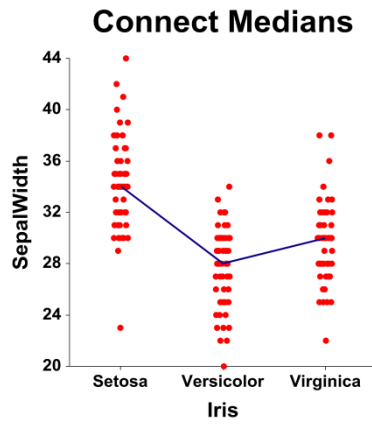


Connecting Lines Tab

Connect Between Groups Section

You can add reference lines at group means and percentiles.

Dot Plots



Titles, Legend, Numeric Axis, Group Axis, Grid Lines, and Background Tabs

Details on setting the options in these tabs are given in the Graphics Components chapter.

Example 1 – Creating a Dot Plot

This section presents an example of how to generate a dot plot. The data used are from the Fisher dataset. We will create dot plots of the *SepalLength* variable, grouping on the type of iris.

Setup

To run this example, complete the following steps:

1 Open the Fisher example dataset

- From the File menu of the NCSS Data window, select **Open Example Data**.
- Select **Fisher** and click **OK**.

2 Specify the Dot Plots procedure options

- Find and open the **Dot Plots** procedure using the menus or the Procedure Navigator.
- The settings for this example are listed below and are stored in the **Example 1** settings template. To load this template, click **Open Example Template** in the Help Center or File menu.

Variables Tab

Data Variable(s).....**SepalLength**
 Horizontal (Group) Variable**Iris**
 Dot Plot Format (*Click the Button*)
 Jittering.....**Checked**

Report Options (*in the Toolbar*)

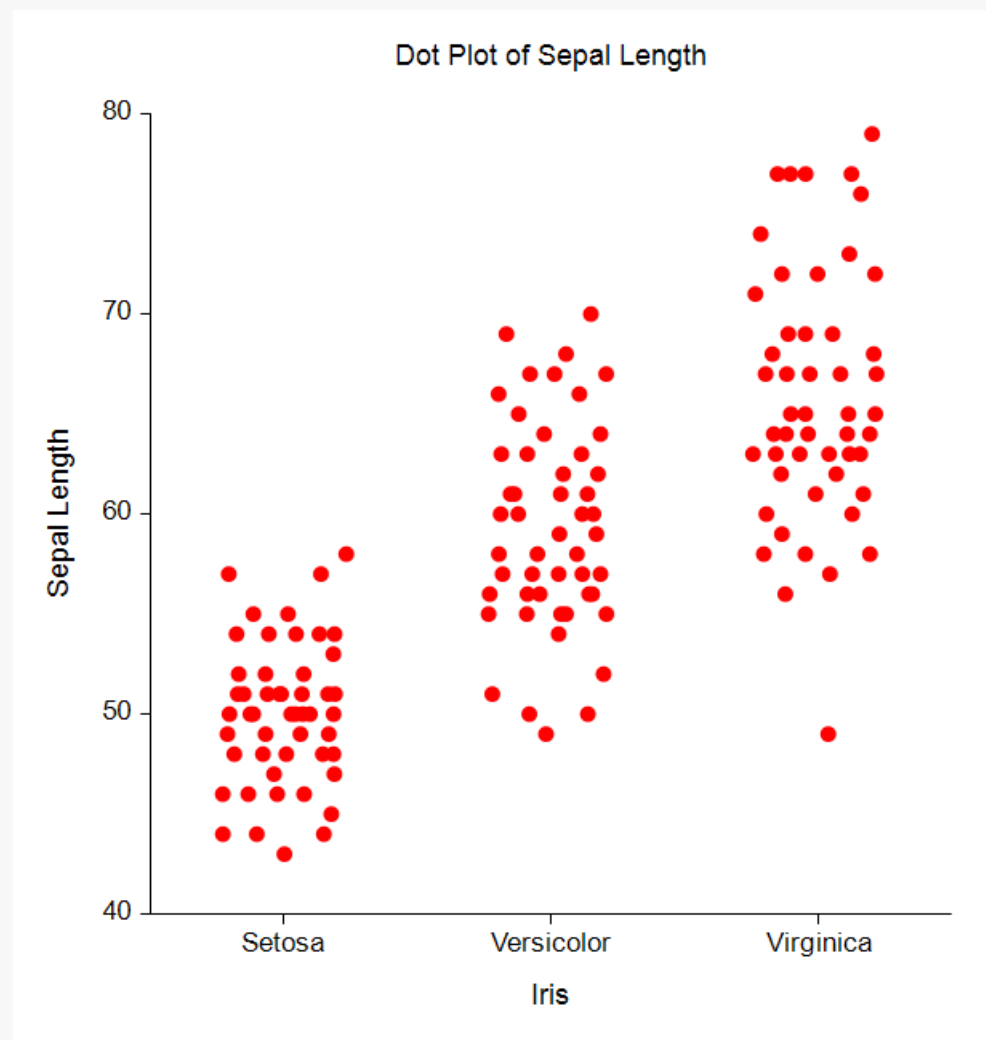
Variable Labels.....**Column Labels**
 Data Labels.....**Value Labels**

3 Run the procedure

- Click the **Run** button to perform the calculations and generate the output.

Dot Plot Output

Dot Plots



Example 2 – Creating a Dot Plot with Subgroups

This section presents an example of how to generate a dot plot with subgroups. The data used are from the fictitious Tree dataset. We will create dot plots of the *Diameter* variable, grouping on *Species*, with subgroups according to *Sunlight*.

Setup

To run this example, complete the following steps:

1 Open the Tree example dataset

- From the File menu of the NCSS Data window, select **Open Example Data**.
- Select **Tree** and click **OK**.

2 Specify the Dot Plots (2 Factors) procedure options

- Find and open the **Dot Plots (2 Factors)** procedure using the menus or the Procedure Navigator.
- The settings for this example are listed below and are stored in the **Example 2** settings template. To load this template, click **Open Example Template** in the Help Center or File menu.

Variables Tab

Data Variable(s).....**Diameter**

Horizontal (Group) Variable.....**Species**

Legend (Subgroup) Variable.....**Sunlight**

Dot Plot Format (*Click the Button*)

Jittering.....**Checked**

Report Options (*in the Toolbar*)

Data Labels.....**Value Labels**

3 Run the procedure

- Click the **Run** button to perform the calculations and generate the output.

Dot Plot Output

