Boxplots in Jamovi with `ggplot2`

Cheatsheet

2024-07-22

About

The **boxplot** is a visual representation of a dataset's distribution, showing the median, quartiles, and outliers. It is useful for comparing distributions between groups and identifying outliers within a single group.

Assumed knowledge

- You have Jamovi installed ideally 2.5.7.0 or later.
- You can follow instructions to select, click and drag elements in Jamovi.

Data structure

The data should be in a **long format** (also known as tidy data), where each row is an observation and each column is a variable (Figure 1). If your data is not already structured this way, reshape it manually in a spreadsheet program or in R using the `pivot_longer()` function from the `tidyr` package.

Sex	BW
F	2.15
M	2.55
F	2.95
F	2.70
M	2.20
F	1.85
M	2.55
M	2.60

F	M
2.15	2.55
2.95	2.20
2.70	2.55
1.85	2.60

Figure 1: Data should be in long format (left) where each row is an observation and each column is a variable. This is the preferred format for most statistical software. Wide format (right) is also common, but may require additional steps to analyse or visualise in some instances.

Data

For this cheatsheet we will use part of the possums dataset used in BIOL2022 labs.

Import data

1. Click on the Menu icon: 
2. Select Open > Browse, and navigate to the downloaded file.
3. Click Open to load the data.

Plot

1. Click on the Analyses tab.
2. Select Exploration > Descriptives.
3. Add `Sex` to the "Split by" box.
4. Add `BW` to the "Variables" box.
5. In the "Plots" tab, select Boxplot.

Export

To export the plot, right click on the plot, select Image > Export… > Browse and rename the file before clicking on the Save button.

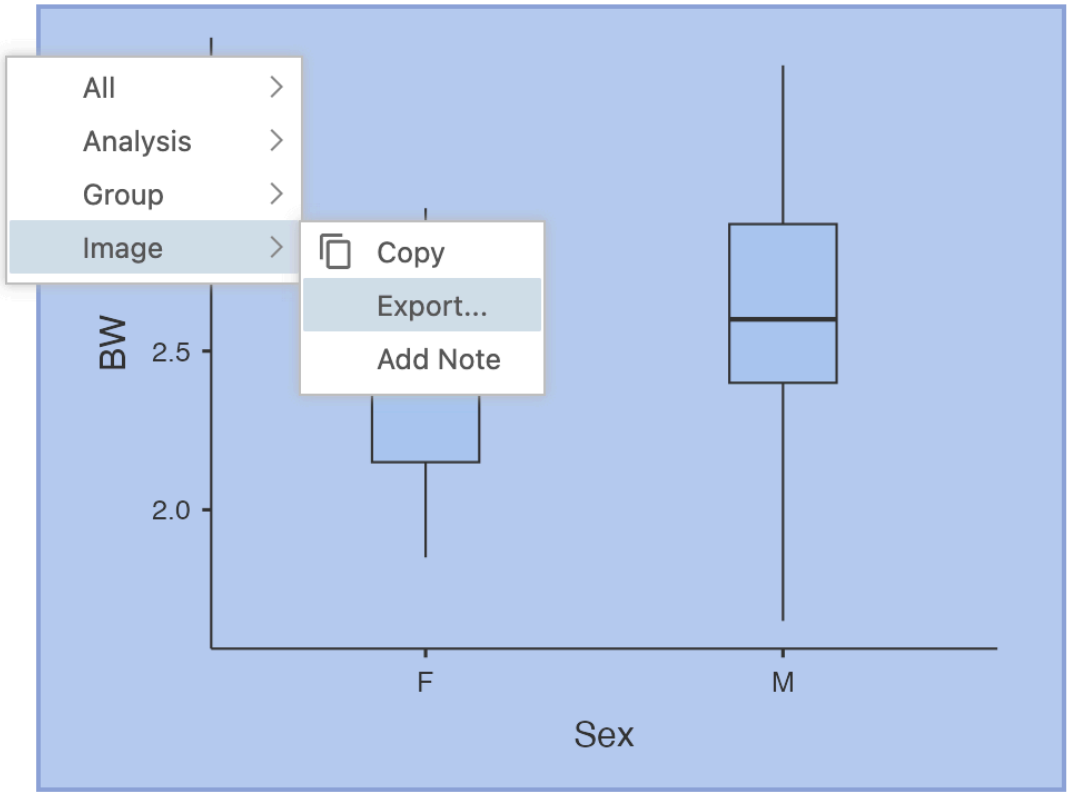

Figure 2: A popup window should appear when you right click on a plot, where you can export the image. Click on the image to expand it.