Scatterplots in Jamovi

Cheatsheet

2024-07-28

About

A scatterplot is a graph that shows the relationship between two variables by displaying data points on a Cartesian plane. Each point represents an observation with its position determined by the values of the two variables. Scatterplots help identify trends, clusters, and outliers in the data.

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 have two separate datasets. The first is part of the possums dataset used in BIOL2022 labs. Two numerical variables are available: `ExpBLUP` and `AactiveTBLUP`. The data is available in the file `possums-blup.csv`.

The second dataset is data were collected and made available by Dr. Kristen Gorman and the Palmer Station, Antarctica LTER, a member of the Long Term Ecological Research Network. The day may be downloaded manually but is available below as `penguins.csv`.

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** > **Scatterplot**.
3. Drag the variables you want to plot into the X and Y boxes. The variables should both be numerical.

4. If you want to colour the points by a categorical variable, drag the categorical variable into the **Color** box.
5. Explore the options for **Regression Line** and **Marginals** by clicking on them.
6. Rename variables by clicking on the variable name in the **Variables** tab.

Export

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

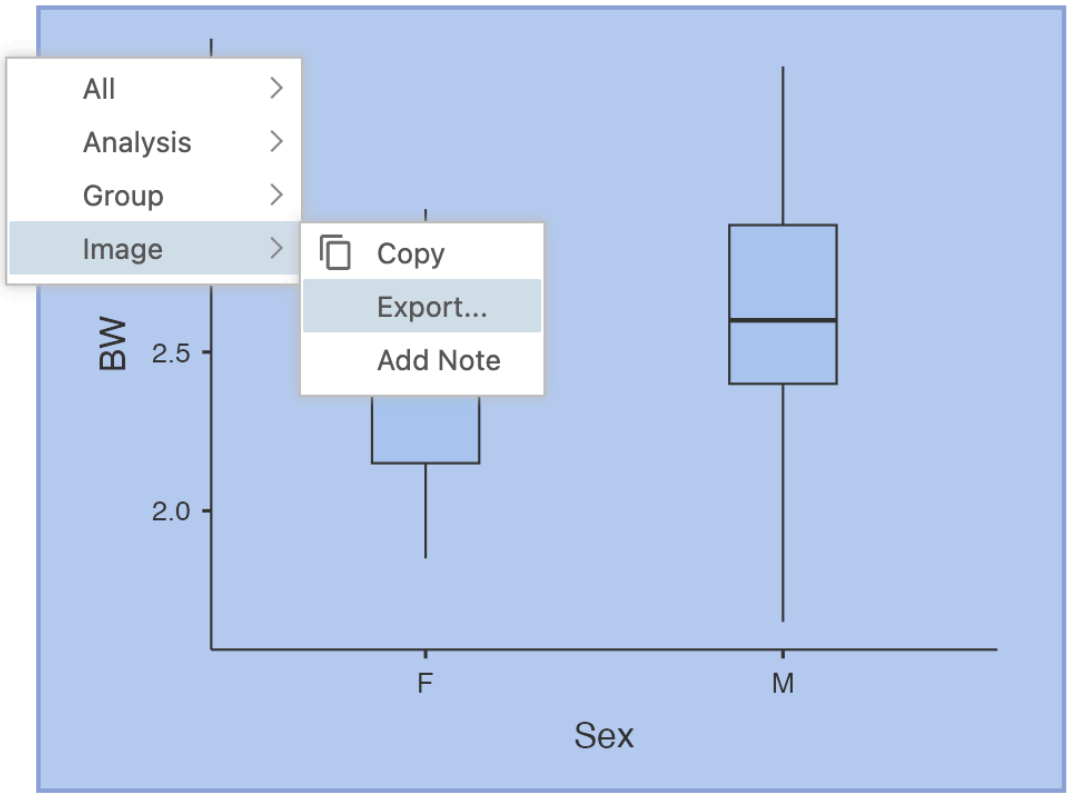

Figure 2: A popup window should appear when you right click on a plot, where you can export the image. Click on the image to expand it.