Histogram in Jamovi

Cheatsheet

2024-07-28

About

The histogram is a bar plot that shows the frequency of (often) continuous values in a dataset. It helps identify patterns, outliers, and the shape of the distribution (skewness, kurtosis).

> **i** 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

🔋 Download data

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

The second dataset, `penguins.csv`, contains data collected by Dr. Kristen Gorman and the Palmer Station, Antarctica LTER. Details about the dataset can be found here.

🔋 Import data into Jamovi

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. Drag the variables you want to plot into the **Variables** box. It should be a numerical variable, e.g. `bill_length_mm` from the `penguins` dataset.

4. Select **Histogram** from the **Plots** dropdown menu.

Extra options

1. If you want to colour the points by a categorical variable, drag the categorical variable into the **Split by** box. For example, you can split the histogram by the `species` variable in the `penguins` dataset.
2. Layer an additional density plot by selecting **Density** from the **Plots** dropdown menu.
3. 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.
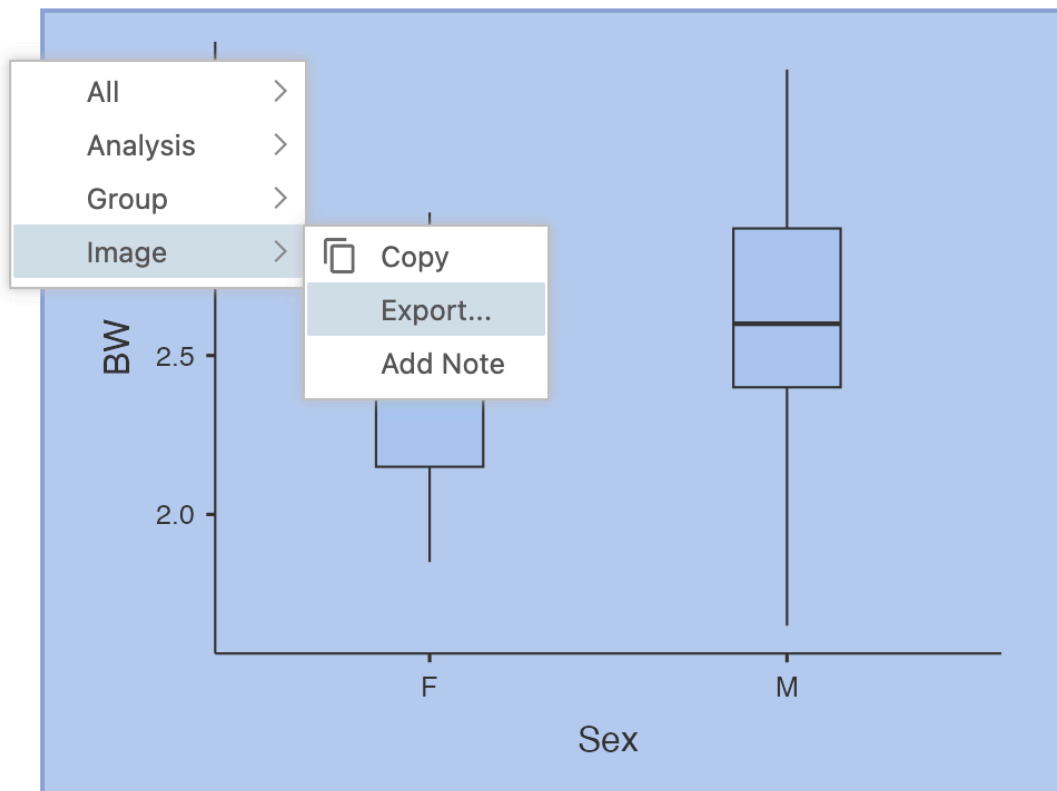

Figure 2: A popup window should appear when you right click on a plot, where you can export the image. Click on the image to expand it.

Resources

- Jamovi website
- datalab.cc Jamovi tutorials – useful video tutorials on how to use Jamovi. Note: videos are from 2020 and may be dated. Click on the menu icon ( ) at the top right of the video to see the full list of tutorials.

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