

Contents of R Script on the cereal dataset

In the first script **Lab#1a.R** you will find examples of:

- Data manipulation with package `tidyverse`.
- Deleting missing values. Using only complete cases.
- Creating a factor and recoding a factor. Although not used in this particular script, `tidyverse` has its own package to deal with factors, `forcats`. You can see an example on the R script on Paris paintings.
- Creating a data frame with summary statistics.
- Using the five main data manipulation verbs: `select`, `filter`, `mutate`, `arrange` and `summarise`.
- Select random rows from the data set.
- Pipe operator, chaining operations.

In the second script **Lab#1b.R** you will find examples of how to use package `ggplot2` to make plots. In particular:

- Creating the basic canvas and adding layers.
- Enhancing the basic scatterplot: use size, color, ... of the point to represent more variables on the same plot.
- Using package `GGally` to create a scatterplot matrix. Many possibilities.

Contents of R Script on the Paris paintings dataset

- Sorting out some problems when reading data. In particular, a numeric variable that it is imported as character.
- Seeing the effect of the logarithmic transformation on several variables.
- Visualizing missing data.
- Recoding categorical variables.
- Examples on how to analyze the distribution of a quantitative variable through the categories of a categorical one.
- Some statistical tests (comparing means, checking normality).
- Exploring relationships between variables.
- Filtering variables and deleting missing observations.