Statistics with R – Advanced Level Practice

Note: If you did not do it already, please download the CSV data files and extract them on your hard drive. You can find the download link in the section *Course Materials*.

Section 1

Mean Difference

Exercise #1

In the data file *vehicles.csv*, perform an analysis of covaraince where the dependent variable is *sales*, the factor is *type* and the covariate is *price*.

Exercise #2

Using the data set *dietsubjects.csv*, perform a within-subjects analysis of variance to determine whether there is a significant difference, on average, between the subjects' weights at five moments of the diet (*weight0* to *weight4*).

Exercise #3

Using the data set *dietsubjects.csv*, execute a mixed analysis of variance to determine whether there is a significant difference, on average, between the subjects' weights at five moments of the diet (*weight0* to *weight4*), separately by gender (0 – female, 1 – male).

Exercise #4

In the data frame *dietsubjects.csv*, use the Friedmann test to determine whether there is a significant difference, on average, between the variables *weight1, weight2* and *weight3*.