

Project II

Comparison of multiple distributions

Every participant of the course was supposed to draw lines of length 4 cm, 8 cm, 12 cm and 16 cm on a sheet of paper, without a measuring device. For each length, lines were drawn both horizontally and vertically, once with closed and once with open eyes. The experiment was intended to investigate whether the accuracy of the estimation of distances depends on the length of the lines, on the orientation of the line (horizontal vs. vertical) and on the use of the sense of sight (open eyes vs. closed eyes). The results of the experiment are provided in the file `linelength.RData`, which is provided in Moodle.

Tasks:

1. Are there differences in the relative deviations of the length of the lines from the target length between the horizontal and vertical lines?
2. Are there differences in the relative deviations of the length of the lines from the target length between lines drawn with open and with closed eyes?
3. Are there any differences in the relative deviations of the length of the lines from the target length between lines of the four different lengths?
4. Are there pairwise differences in the relative deviations of the length of the lines from the target length between lines of different lengths?

When performing tasks 3 and 4, it is allowed to neglect the information that the data contains repeated measurements of the same individuals.

Submission

Submission of the report and the corresponding (executable and commented) program code until Friday, January 8th, 2021, 08:30 am, in Moodle.