

MLW/KUHeS Introduction to R short course

Module 1 - Practical

Marc Henrion

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Go to the course website on GitHub:

https://github.com/mlw-stats/R_And_Statistics_Training_2023

From here, download the following files

`btTBreg.csv`

`btTBregHospitals.csv`

`btTBreg_info.txt`

1. Load the `btTBreg.csv` data table into R
2. The variables `cd41`, `cd42` and `cd41.sk`, `cd42.sk` measure the same variables (`cd4` and `cd4.sk` respectively) in the same individuals at two different time points. This means the data are in wide format. Reformat to long format.
3. Save the reformatted data into a file called `btTBregLong.tab` in such a way that
 - i. Columns are tab-separated.
 - ii. Columns names are saved.
 - iii. No row number is saved in the resulting file.
4. Load the `btTBregHospitals.csv` data table. Join the data frames storing `btTBreg.csv` and `btTBregHospitals.csv`.
5. Compute the average patient age and the proportion of male patients for each hospital.
6. Write an R function that computes the following summary statistics, then, using your custom function, compute these for the `bmi`, `cd41`, `cd42`. columns:
 - i. mean

- ii. median
- iii. inter quartile range
- iv. minimum
- v. maximum

7. Do the same now, but only for female students. Repeat for only male students.