

MLW / KUHeS Statistics and R short course

Session 1 - Practical

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Go to the course website on GitHub:

https://github.com/mlw-stats/R_And_Statistics_Training_2021/Session1

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 point. 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. Column 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
 - vi. number of missing values
7. Do the same now, but only for female patients. Repeat for only male patients.