MLW / KUHeS Statistics and R short course

Session 6 - Practical

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1. Simulate a dataset and save it as a binary R data file (*.rda or *.RData).
2. Write a new quarto document which:

- Loads the simulated data.
- Performs a basic analysis and produces a table with results.
- Displays a graph.
- Make sure to use quarto's capability of providing a *commentary* along with your analysis.

3. Create an account on Zenodo, figshare or GitHub and upload your files there.

Suggestions / hints

Simulated data (as an example)

```
dat<-data.frame(
  type=sample(c("A","B"),size=100,prob=c(0.6,0.4),replace=T),
  x=rnorm(100,sd=5),
  y=rexp(100)
) %>%
  dplyr::mutate(
    z=ifelse(type=="A", 2*x-y+5, 1.25*x-0.5*y+1) + rnorm(100,sd=1.25)
  )
```

Analysis (as an example)

- t-test comparing variable z between types A & B.
- Linear regression of z against x.

Graph (as an example)

- Scatterplot of z against x, stratified by type.
- Boxplot of z values by type.
- Barplot of type.