**INDIVIDUAL RESEARCH PROJECT**

One of the aim of the course is to teach the course participants how to work with real and potentially messy datasets. For the pilot research project you should use the tools learned in class (plotting, hypothesis testing, (multiple/logistic) regression) and apply them to a dataset of your choice. For the pilot research project you will work on your own.

The instructor will provide links to webpages with datasets such as http://data.un.org/ Notice that you have to submit the research question and a link to the dataset. Each course participant should work with a different dataset. You are given substantial freedom in what you do, i.e. designing an experiment, survey, or using existing observational data. You are also expected to refine the question such that you are able to develop a feasible project that can be completed within this semester.

The report should be structured as follows. In a first part, you should choose a dataset, read it into the software R and explore it using for instance different plots. The report should moreover contain some background information on the dataset. In a next step you should identify a multivariate/logistic/nonparametric regression problem and run a regression. You should also identify a statistical testing problem and perform a statistical test (e.g. chi^2, ANOVA, t-test, Wilcoxon signed rank test,…) (you can test for instance whether a certain proportion in your dataset is significantly different from another one). The last paragraph of the report should address possible quantitative questions that one could ask to further explore the dataset. Each student should hand in a report of at most five pages which summarises the research questions and the results.

The report has to be handed in together with the R code and the dataset(s). The assignment will be evaluated to equal parts based on (A) correct application of methods learned in class, (B) correct R code (C) scientific understanding (e.g. understanding data, critically questioning of the quality of the dataset, formulating possible research questions connected to the dataset, showing ability of doing quantitative research). **For the grade, it will not play a role, whether you find interesting patterns or a statistically significant relationship in your dataset or not.**

You individual research project MUST include:

1) A research question;

2) Formulation of hypotheses.

3) Critical discussion of the sample, data and method used to analyse the data.

4) Brief discussion of the limitations of your study.

5) Complete Rscript containing analyses for the projects

6) The dataset(s) for the project (upload as separate file(s))

7) The project should **not exceed five pages** (including figures and tables, 11pt/single-line spacing).

8) Grade deductions will apply when R output is simply copied and pasted;

9) Report must be submitted as PDF.

Each of these projects must be tackled individually. Any close resemblance of your work with that of your peers will result in a zero for the project and a disciplinary action.