

Usable Security and Privacy Exercise 1

Programming Self-Assessment

The goal of the following exercises is to get you started with working with study data.

In the ecampus exercise group you can find the anonymized results of the Programming Self-Assessment Survey. The file is available in two versions, namely 'USECAPProgrammingSelf-AssessmentSurvey-num.csv' and 'USECAPProgrammingSelf-AssessmentSurvey-char.csv'. One uses numeric values for the answers. The other uses the string values of the answers. You will need both to understand and solve the exercise.

Exercise 1 (Getting Ready):

A common tool / programming language for the analysis of surveys is R.

Download and install R as well as R Studio. The following links can give further information.

<https://cran.r-project.org/>

<https://cran.r-project.org/doc/manuals/r-release/R-admin.pdf>

<https://www.rstudio.com/>

Exercise 2 (Getting used to R):

Note: load the appropriate csv-file.

- a) What is the mean of years of programming experience?
- b) What is the median of contributions to open source projects?
- c) How many students judge their programming skills to be at least a bit better than their fellow students?

Exercise 3 (Working with Likert-Scales):

Note: load the appropriate csv-file.

- a) Create a barplot of the question "Please rate your agreement with the following statement: I really enjoy programming!".
- b) Determine the mean of the question "Please rate your agreement with the following statement: I really enjoy programming!".
- c) Discuss advantages / disadvantages of the methods shown in a and b.

If you have questions please contact us via the message board in the respective exercise group at ecampus.