

HOW TO WRITE AN R PACKAGE

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Workshop leader

Martin Mächler is Lecturer and Senior Scientist at the Seminar for Statistics, ETH Zurich. He is founding member of the R Core Development team and the R Foundation for the R Project. More than 20 R packages on CRAN are maintained by him, e.g., cluster, Matrix, robustbase, cobs and VLMC, and he is also part of the Rmetrics core team. He co-manages the R related mailing lists. He teaches computational statistics, clustering algorithms and did research on robust statistical methods, sparse matrix algorithms, "Wp" smoothing and Variable Length Markov Chains.



More information is available on Martin's website at <http://stat.ethz.ch/people/maechler>.

Outline

An R package is an increasingly important way to share knowledge with colleagues, and to make newly developed methods available to other users or researchers, as an almost de facto standard for reproducible statistical research.

A statistical consulting and data analysis project could well result in providing the client with customized R package, including functions, data and data analysis with the final report (as a so-called "Sweave vignette").

Even if only used company-internally or privately, an R package is **the** recommended container for bundling functions and/or data sets, typically including documentation and internal consistency checks, i.e., quality assurance of the procedures involved. At a minimum it is simply helpful to maintain an overview of R resources on your personal computer.

In this one day workshop we will write our own R package. We will work through every step needed to transform a collection of functions into an R package including writing the help-files exemplarily for one function that the participants have written earlier. We will look into the consistency checking tools of R ("R CMD check" etc) and further explain the publication process.

Prerequisites

Workshop participants will be assumed to be experienced R users and have some basic experience with TeX / LaTeX (the free mathematical/scientific typesetting software). They should bring at least one R function they have written earlier.

Bring a computer with pre-installed R software at its latest release (see CRAN.R-project.org), at least version 2.13.0.

For full package building, you also need TeX / LaTeX. Under Windows, you get and install “MikTeX” from <http://www.miktex.org/>). Under Windows, if you intend to also build packages with C or Fortran source code, you'd also need the “Rtools”, <http://www.murdoch-sutherland.com/Rtools/> . However these are not required for the course.

The course language will be English.

Location

The course will be held in the House of Sciences, Berne, 10 min from the railway station, see http://www.scnat.ch/d/Kontakt/House_of_Sciences/ .

Date and hour

Wednesday, October 19. 9.00 to 17.30 with 1 h lunch break.

Course fee

- CHF 250.-- for members of the Swiss Statistical Society, other applicants CHF 400.--.

The course fee includes printed documentation, and drinks during the course.

The number of participants is limited to 25 with a minimum of 10.

Registration deadline

August 20, 2011

Registration and further information

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