R Language

Document Author: arho.virkki@tyks.fi

Miscellaneous R scripts and tips

Installation and first steps

For the server environment, see the installation instructions for R Language. For a personal intallation (e.g. for a laptop), download R from https://www.r-project.org/ and follow the instructions. If you have already installed R, Familiarize yourself with the original, official open source manuals:

- https://cran.r-project.org/manuals.html
- https://cran.r-project.org/doc/manuals/r-release/R-intro.html

Brief history

R is based on S-language, which was published in 1976, and t he first version of R appeared in 1993. The source code is under the GNU-license (like the Linux kernel), which means that the language is free and can be used in commercial settings, but not embedded in closed source products. This must just be taken into account, but it does not impose any practical limitations of R use.

There are version for Windows, OS X and Linux systems available at the R web site. R can be extended with custom functions (R scripts), packages from the comprehensive R archive network (CRAN), o wn custom written packages, and C/C++ or Java code, to name a few alternatives. For details, see: https://en.wikipedia.org/wiki/S_(programming_language)

Editors

RStudio R editor, or Rstudio Server
http://www.rstudio.org/

Notepad++, a must have editor for Windows
http://notepad-plus-plus.org/

Eclipse with StatET plug-in
http://www.eclipse.org/
http://www.walware.de/goto/statet/

Emacs with ESS (Emacs Speaks Statistics) plug-in
http://vgoulet.act.ulaval.ca/en/emacs/
http://ess.r-project.org/

Vim with optional Nvim-R extension
http://www.vim.org/download.php/
http://macvim-dev.github.io/macvim/
http://www.vim.org/scripts/script.php?script_id=2628

RStudio is the easiest to begin with, whereas Vim is hard to master, but really powerful.

Vim configuration

Example Vim configuration file for R (`~/.vimrc`);

```
" Configure indentation
set shiftwidth=2
set tabstop=2
" Expand all tabs into spaces
set expandtab

" Configure indentation to work with R
set nocompatible
syntax enable
filetype plugin on
filetype indent on

if has("gui_running")
  set lines=50 columns=80   " Set geometry
  set guioptions-=T         " Remove toolbar
  set guioptions-=r         " Remove right-hand scroll bar
  set guioptions-=L         " Remove left-hand scroll bar
  set guifont=Monospace\ 11 " Set font
endif
```