

A Glossary of R Terms

base R This is the main R installation that contains all the basic capabilities commonly used by most people. Additional capabilities are found in packages which can be added to R.

console A GUI application window on your computer in which you communicate with R, entering commands and seeing the textual results (graphics go into a separate window).

context sensitive editor An editor which knows about R and its syntax. It functions like a simple word processor, but color-codes the input text according to the syntax of R. It may also complete parentheses, give hints about argument functions and make breakfast. Some of these capabilities come with the base installation of R, and there are add on programs that do more complex things. Details vary with platform (Mac, Windows etc).

CRAN Comprehensive R Archival Network. A series of servers at institutions around the world which make the R software available. These are also called mirror sites. When new versions become available, they are posted to these servers over a period of several hours or days.

data frame A very important concept. Conceptually a table, with observations in rows, and variables in columns. Each column may be a different type or mode. Every "cell" must have a value and hence every column must have the same number of values, but that value could be NA.

functions Functions are collections of R commands that do a specific task. They have names and arguments. The format is `function_name(argument_1, argument_2, etc)`. From a computer science point of view, R is a functional language. The idea is analogous to the mathematical definition of a function $y = f(x)$.

library A folder on your computer which contains all the packages you have downloaded and installed.

list Like a data frame, except that the columns may have different lengths. Hence, the "rows" don't necessarily corresponds to observations like they do in a data frame.

IDE Integrated development environment. A complete set of software tools for working with a given program. Rstudio (see Rstudio.org) is a new and very popular IDE for R.

mirror site See CRAN.

mode (of an object) Also called "type". The nature of the stored data: integer, numeric, character, list etc.

open source A movement in computer science in which software is written by groups of people in a community fashion, and anyone is free to join and make modifications to the software. R is open source, free to download, use, and possibly modify.

packages A set of functions to carry out particular tasks. These may be written by anyone and submitted to CRAN or other repositories. The quality of a package can vary considerably, as can how often is it updated. Even if you have a package installed on your computer (i.e. installed into your local library), you still have to check out the package to use it (`> library("package_name")`).

RStudio See IDE.

script See source file.

source file or script A text file containing commands for R to execute. If you have more than a tiny task, it makes sense to use a source file to develop, perfect and document your work. Also used as a verb, in the sense of *to source* a file or script.

type (of an object) See "mode".

vector A string of values of the same mode/type. May be only one value (length 1).