Basics of R Programming

Mahesh Divakaran

Amity University, Lucknow

2024-09-28

What is R?

R is an open-source environment for statistical computing and visualisa- tion. It is based on the S language developed at Bell Laboratories in the 1980's [20], and is the product of an active movement among statisti- cians for a powerful, programmable, portable, and open computing en- vironment, applicable to the most complex and sophsticated problems, as well as "routine" analysis, without any restrictions on access or use.

What is R?

Here is a description from the R Project home page: "R is an integrated suite of software facilities for data manip- ulation, calculation and graphical display. It includes:

an effective data handling and storage facility,

a suite of operators for calculations on arrays, in partic- ular matrices,

a large, coherent, integrated collection of intermediate tools for data analysis,

graphical facilities for data analysis and display either on- screen or on hardcopy, and

a well-developed, simple and effective programming lan- guage which includes conditionals, loops, user-defined re- cursive functions and input and output facilities."

Code

When you click the **Render** button a presentation will be generated that includes both content and the output of embedded code. You can embed code like this:

```
[1] 2
```