

R- Programming Language

Module 1

R : Programming Language



R is a widely used open-source programming language in the fields of statistical research and data analysis. The development of this language took place in 1992, led by 2R - Ross Ihaka and Ross Gentleman.

Open-Source Means:

Open-source means accessible to all users; any user can use, distribute, and modify it. Open-source protocols are applicable that allow users to use the software or programming language freely. The R-programming language software is released under the terms of the GNU (General Public License). The Open-source platform facilitates a collaborative environment where like-minded individuals can contribute to improving programming software.

Compatibility

R is compatible with all operating systems viz. WINDOWS, MAC-OS, LINUX, UNIX.



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R-Language



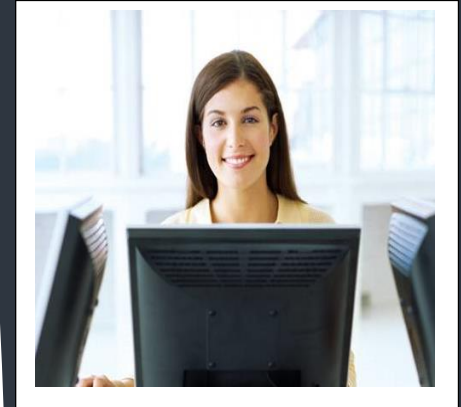
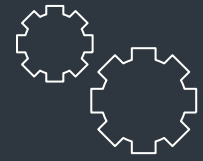
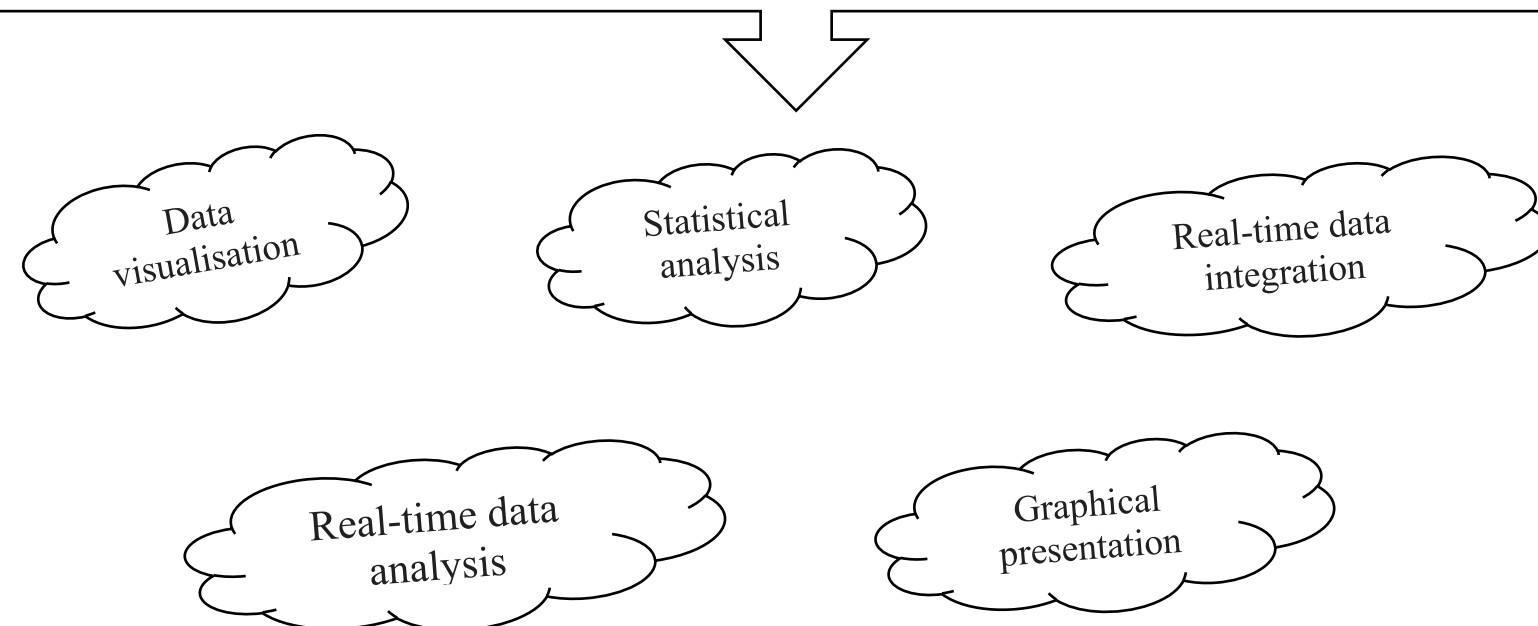


Key Aspects

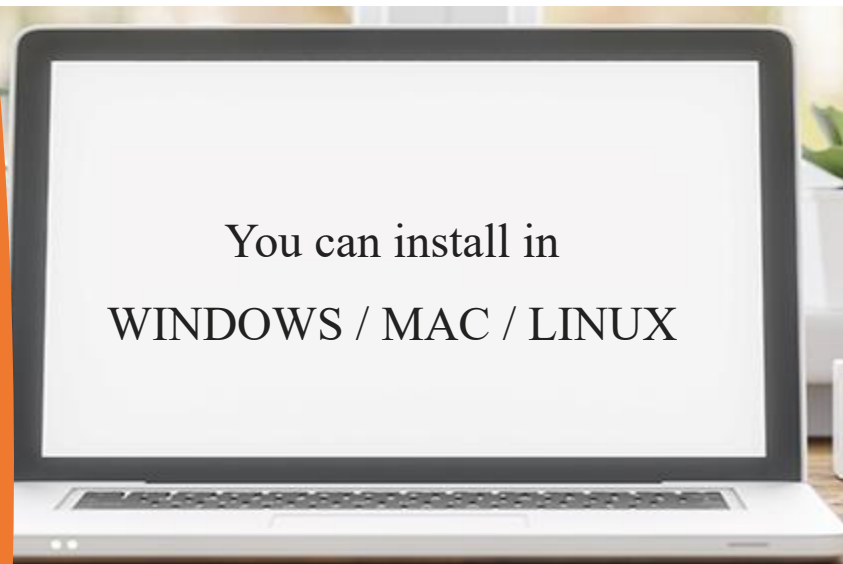
- Offers extensive support for a wide range of statistical tools and techniques;
- Enables the creation of visually appealing and accurate data representations through the use of charts and graphs;
- Seamless incorporation of various programming languages, such as C++;
- The computing method for large data sets is time-consuming, resulting in poor performance;
- The primary interface is command-line-oriented, with less emphasis on graphical user interface alternatives;
- Most commonly used for tasks involving data wrangling.



Real Time Applications : There are multiple applications of the R programming language. However, specifically, the language is used for



Install R Programming Language



Go to CRAN to download R programming Language

Link : <https://cran.r-project.org>
[The Comprehensive R Archive Network \(r-project.org\)](https://cran.r-project.org/)



The Comprehensive R Archive Network



Download and Install R

Precompiled binary distributions of the base system and contributed packages, **Windows and Mac** users most likely want one of these versions of R:

- [Download R for Linux \(Debian, Fedora/Redhat, Ubuntu\)](#)
- [Download R for macOS](#)
- [Download R for Windows](#)

R is part of many Linux distributions, you should check with your Linux package management system in addition to the link above.

Source Code for all Platforms

Windows and Mac users most likely want to download the precompiled binaries listed in the upper box, not the source code. The sources have to be compiled before you can use them. If you do not know what this means, you probably do not want to do it!

- The latest release (2023-10-31, Eye Holes) [R-4.3.2.tar.gz](#), read [what's new](#) in the latest version.
- Sources of [R alpha and beta releases](#) (daily snapshots, created only in time periods before a planned release).
- Daily snapshots of current patched and development versions are [available here](#). Please read about [new features and bug fixes](#) before filing corresponding feature requests or bug reports.
- Source code of older versions of R is [available here](#).
- Contributed extension [packages](#)

Questions About R

- If you have questions about R like how to download and install the software, or what the license terms are, please read our [answers to frequently asked questions](#) before you send an email.

Supporting CRAN

- CRAN operations, most importantly hosting, checking, distributing, and archiving of R add-on packages for various platforms, crucially rely on technical, emotional, and financial support by the R community.

Please consider making [financial contributions](#) to the R Foundation for Statistical Computing.

