



R & RStudio Installation

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AGENDA

01 R Installation

02 RStudio Installation

Install R

- For Windows

- ✓ <http://www.r-project.org>

- ✓ Download 'R base' file: the latest version is 4.0.2 for windows



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Download

CRAN

R Project

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R Blog

The R Project for Statistical Computing

Getting Started

R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. To [download R](#), please choose your preferred [CRAN mirror](#).

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.

News

- **R version 4.0.2 (Taking Off Again)** has been released on 2020-06-22.
- [useR! 2020 in Saint Louis has been cancelled](#). The European hub planned in Munich will not be an in-person conference. Both organizing committees are working on the best course of action.
- **R version 3.6.3 (Holding the Windsock)** has been released on 2020-02-29.
- You can support the R Foundation with a renewable subscription as a [supporting member](#)

Install R

- For Windows

- ✓ <http://www.r-project.org>

- ✓ Download 'R base' file: the latest version is 4.0.2 for windows

Korea

<https://ftp.harukasan.org/CRAN/>

<https://cran.yu.ac.kr/>

<https://cran.seoul.go.kr/>

<http://healthstat.snu.ac.kr/CRAN/>

<https://cran.biodisk.org/>

Information and Database Systems Laboratory, Pukyong National University
Yeungnam University
Bigdata Campus, Seoul Metropolitan Government
Graduate School of Public Health, Seoul National University, Seoul
The Genome Institute of UNIST (Ulsan National Institute of Science and Technology)

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](#)
- [Download R for \(Mac\) OS X](#)
- [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.

R for Windows

Subdirectories:

[base](#)

Binaries for base distribution (managed by Duncan Murdoch). This is what you want to **install R for the first time**.

[contrib](#)

Binaries of contributed CRAN packages (for R \geq 2.11.x; managed by Uwe Ligges). There is also information on [third party software](#) available for CRAN Windows services and corresponding environment and make variables.

[old contrib](#)

Binaries of contributed CRAN packages for outdated versions of R (for R $<$ 2.11.x; managed by Uwe Ligges).

[Rtools](#)

Tools to build R and R packages (managed by Duncan Murdoch). This is what you want to build your own packages on Windows, or to build R itself.

Install R

- For Windows

- ✓ <http://www.r-project.org>

- ✓ Download 'R base' file: the latest version is 4.0.2 for windows



CRAN

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[R Homepage](#)

[The R Journal](#)

Software

[R Sources](#)

[R Binaries](#)

[Packages](#)

[Other](#)

Documentation

[Manuals](#)

[FAQs](#)

[Contributed](#)

R-3.6.1 for Windows (32/64 bit)

[Download R 3.6.1 for Windows](#) (81 megabytes, 32/64 bit)

[Installation and other instructions](#)

[New features in this version](#)

If you want to double-check that the package you have downloaded matches the package distributed by CRAN, you can compare the [md5sum](#) of the .exe to the [fingerprint](#) on the master server. You will need a version of md5sum for windows: both [graphical](#) and [command line versions](#) are available.

Frequently asked questions

- [Does R run under my version of Windows?](#)
- [How do I update packages in my previous version of R?](#)
- [Should I run 32-bit or 64-bit R?](#)

Please see the [R FAQ](#) for general information about R and the [R Windows FAQ](#) for Windows-specific information.

Other builds

- Patches to this release are incorporated in the [r-patched snapshot build](#).
- A build of the development version (which will eventually become the next major release of R) is available in the [r-devel snapshot build](#).
- [Previous releases](#)

Note to webmasters: A stable link which will redirect to the current Windows binary release is CRAN.MIRROR>/bin/windows/base/release.htm.

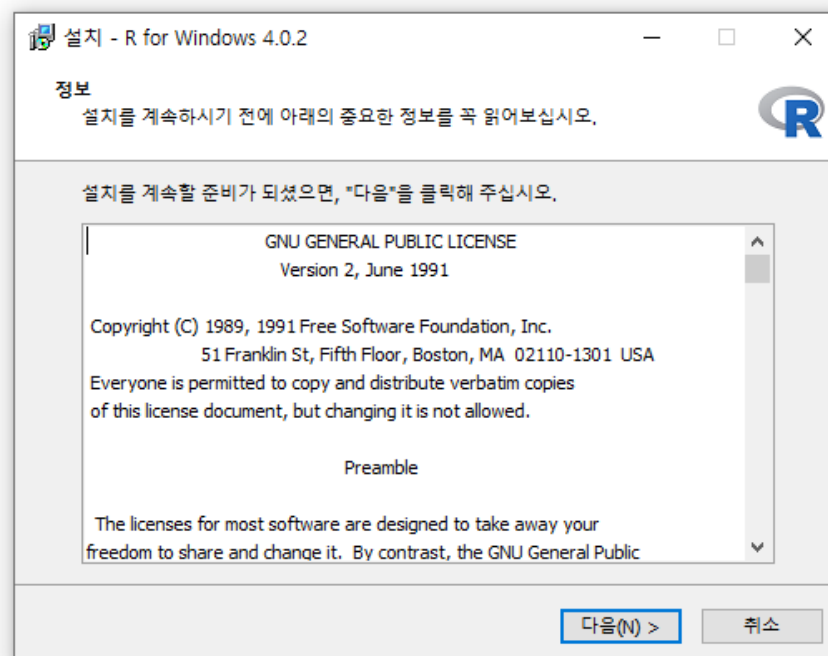
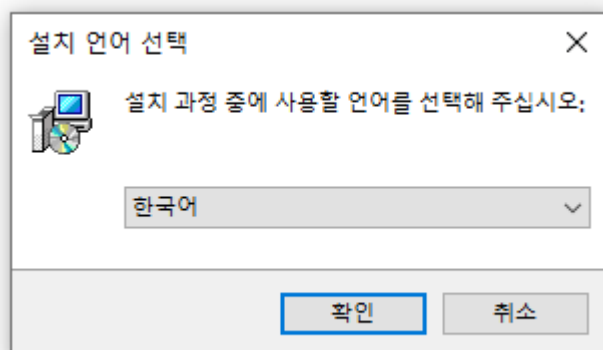
Last change: 2019-07-05

Install R

- Run R-4.0.2-win.exe
 - ✓ If you use other OS (Mac or Linux) use the corresponding file
- Select your preferred language
- Read the license and click next



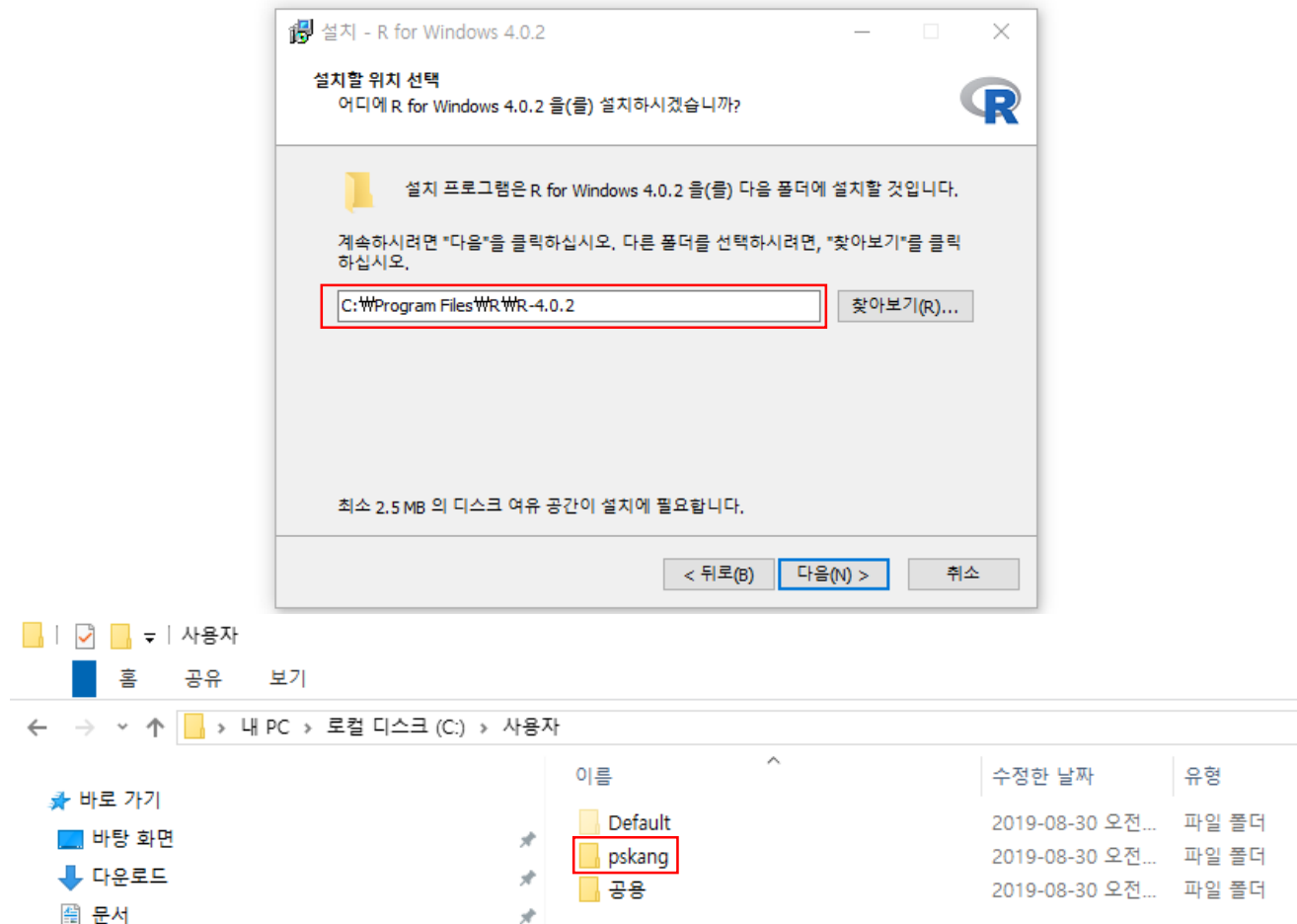
R-4.0.2-win.exe



Install R

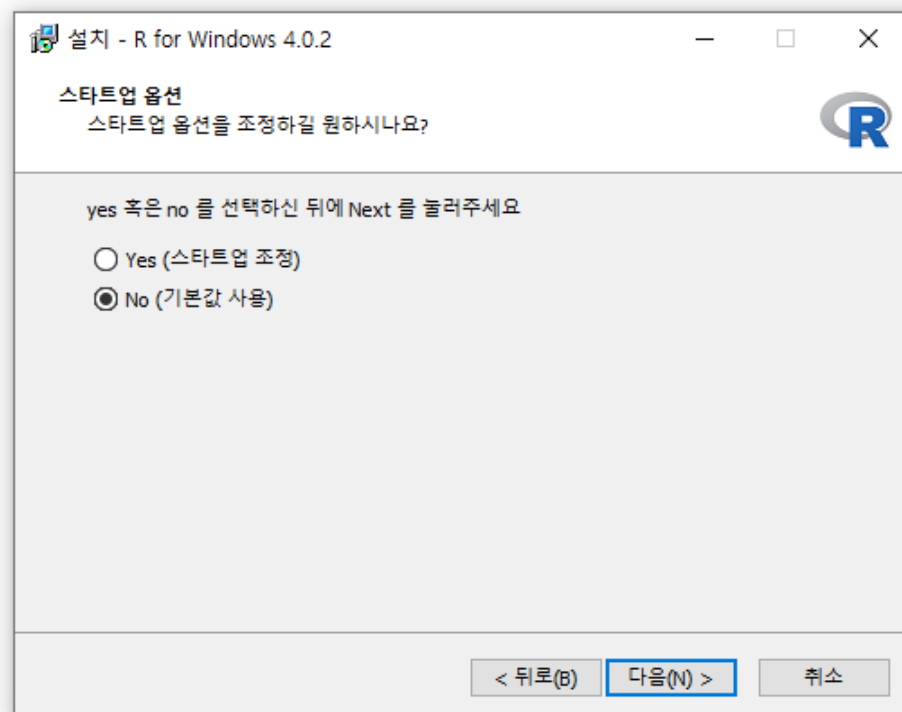
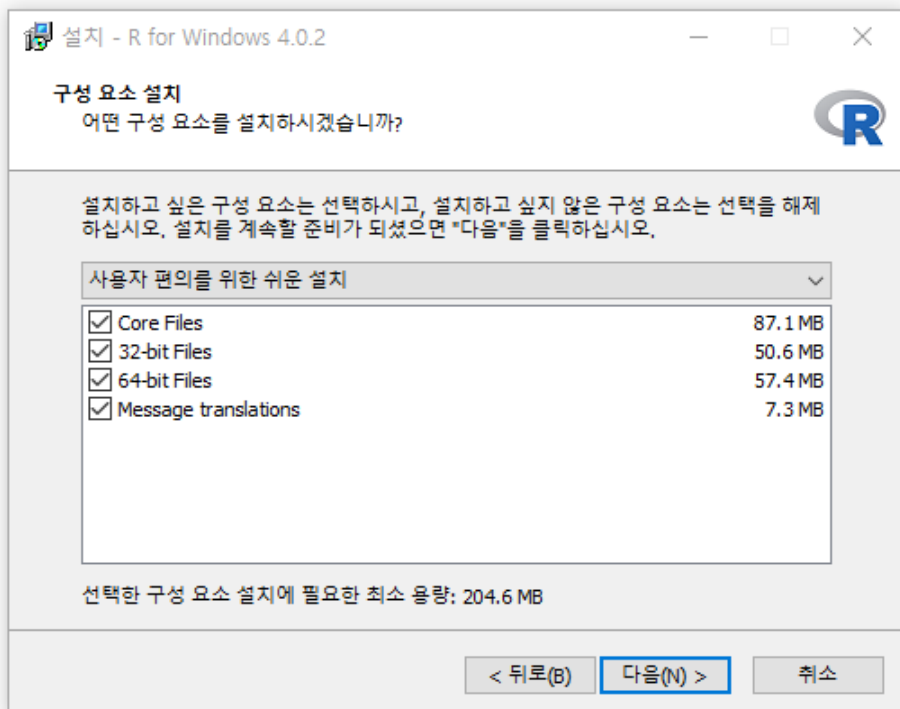
- Select the installation folder

✓ (Caution!) User name and installation folder must be English Alphabets, not 한글



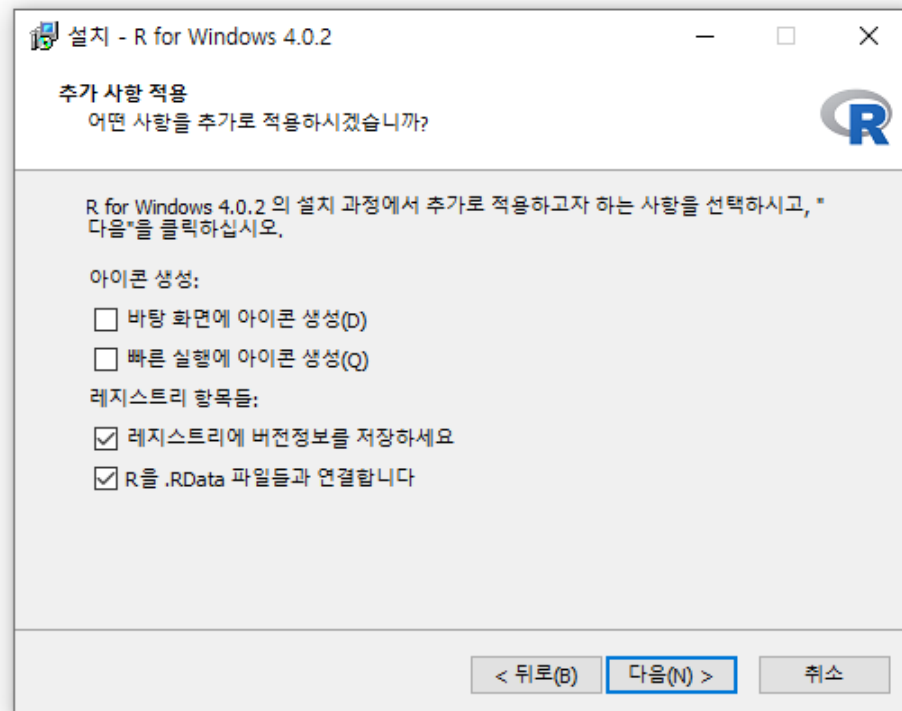
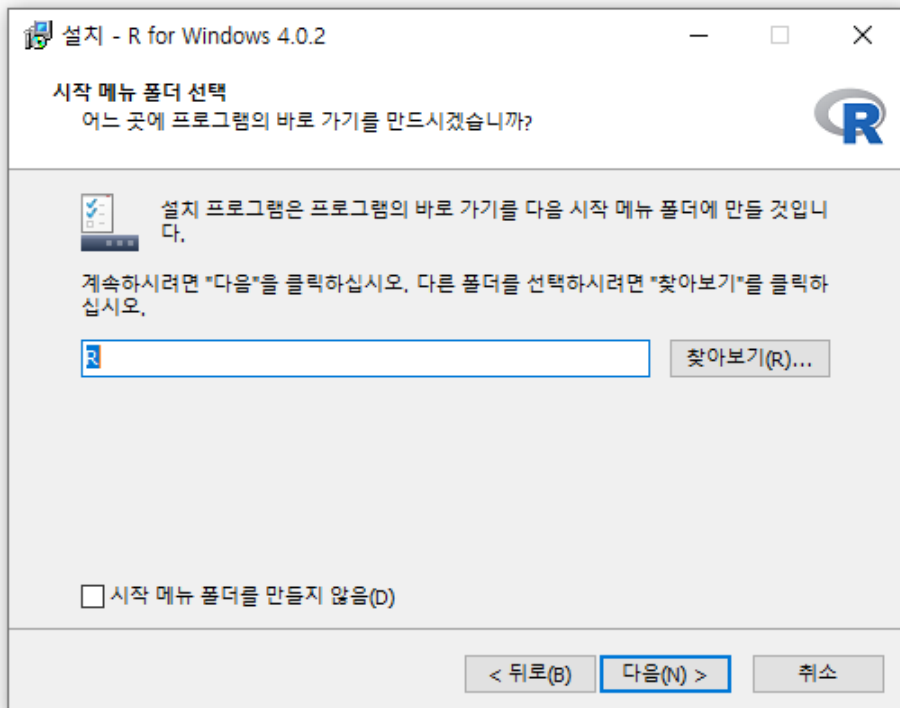
Install R

- Check all components and do not change the startup options (recommended)



Install R

- Set the Start Menu folder and Create icons

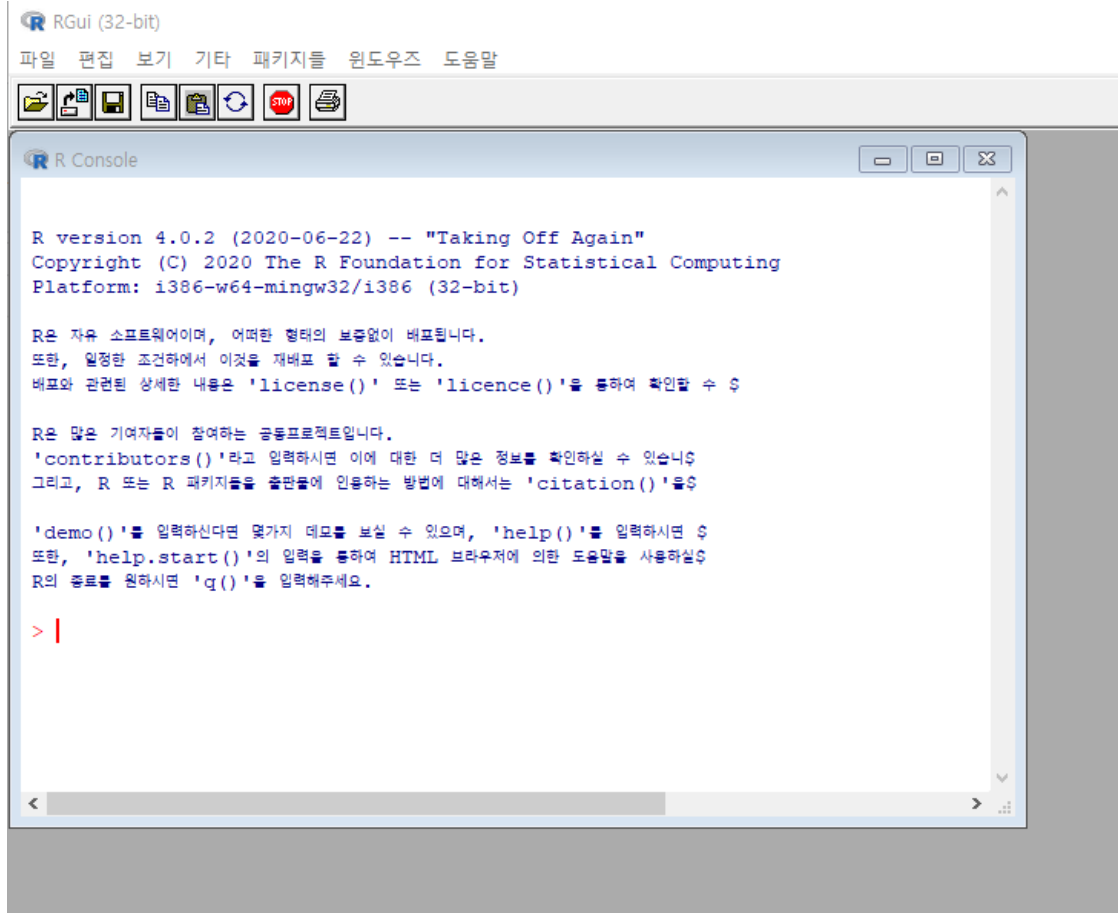


Install R

- Complete installation and check whether R is properly installed

✓ Windows → Search → type "R i386" → Click the application

✓ You will see



The screenshot shows the RGui (32-bit) application window. The title bar reads "RGui (32-bit)". The menu bar includes "파일", "편집", "보기", "기타", "패키지들", "윈도우즈", and "도움말". The toolbar contains icons for file operations and execution. The R Console window is open, displaying the following text:

```
R version 4.0.2 (2020-06-22) -- "Taking Off Again"
Copyright (C) 2020 The R Foundation for Statistical Computing
Platform: i386-w64-mingw32/i386 (32-bit)

R은 자유 소프트웨어이며, 어떠한 형태의 보증없이 배포됩니다.
또한, 일정한 조건하에서 이것을 재배포 할 수 있습니다.
배포와 관련된 상세한 내용은 'license()' 또는 'licence()'를 통하여 확인할 수 있습니다.

R은 많은 기여자들이 참여하는 공동프로젝트입니다.
'contributors()'라고 입력하시면 이에 대한 더 많은 정보를 확인할 수 있습니다.
그리고, R 또는 R 패키지들을 출판물에 인용하는 방법에 대해서는 'citation()'을 입력하십시오.

'demo()'를 입력하신다면 몇가지 데모를 보실 수 있으며, 'help()'를 입력하시면 R의
또한, 'help.start()'의 입력을 통하여 HTML 브라우저에 의한 도움말을 사용할 수 있습니다.
R의 종류를 원하시면 'q()'를 입력하십시오.

> |
```

AGENDA

01 R Installation

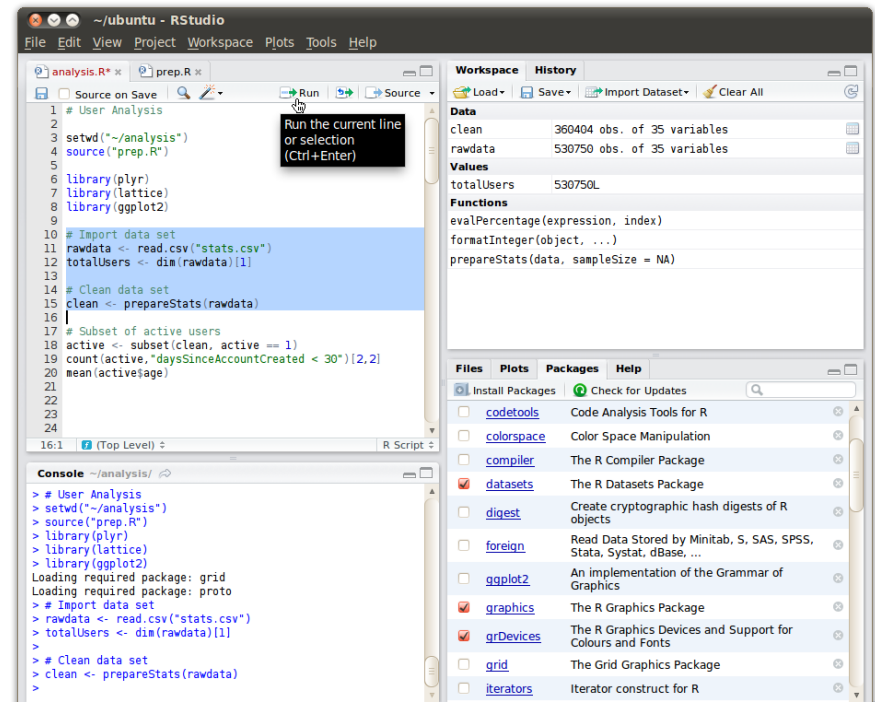
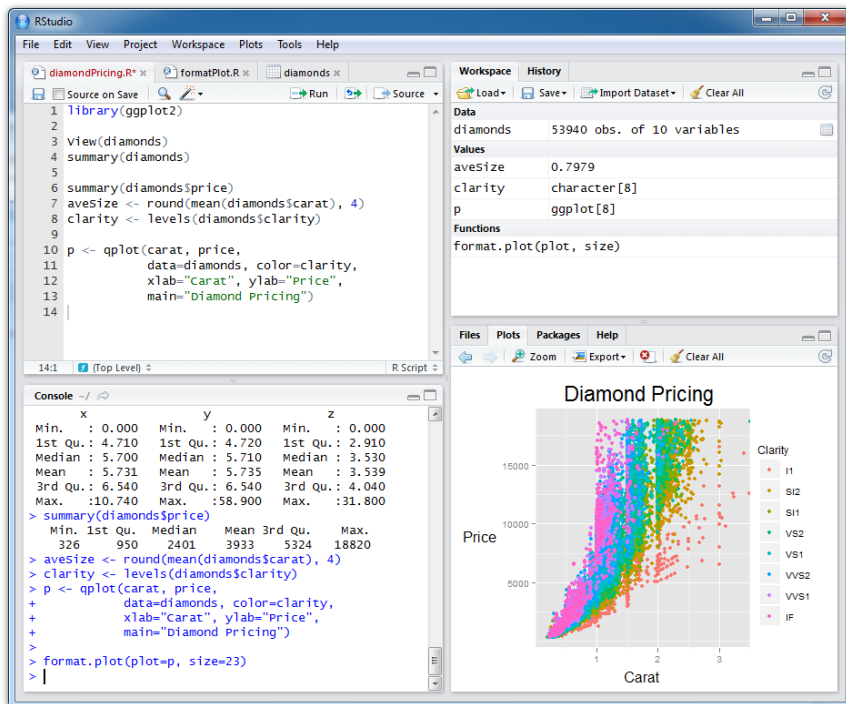
02 RStudio Installation

Install RStudio

• RStudio

✓ A free and open source integrated development environment (IDE) for R

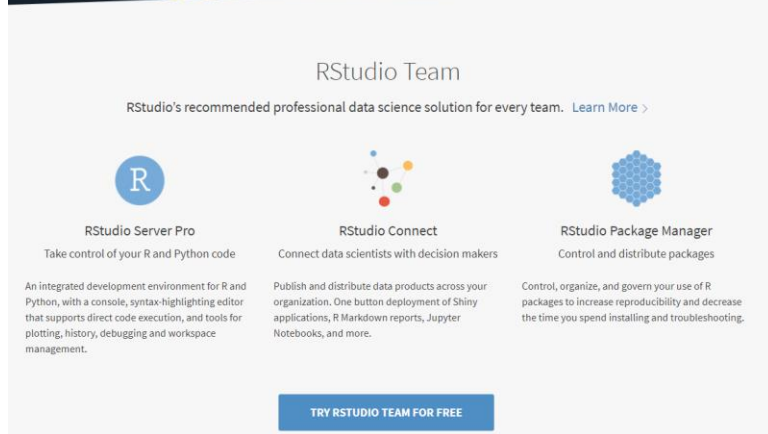
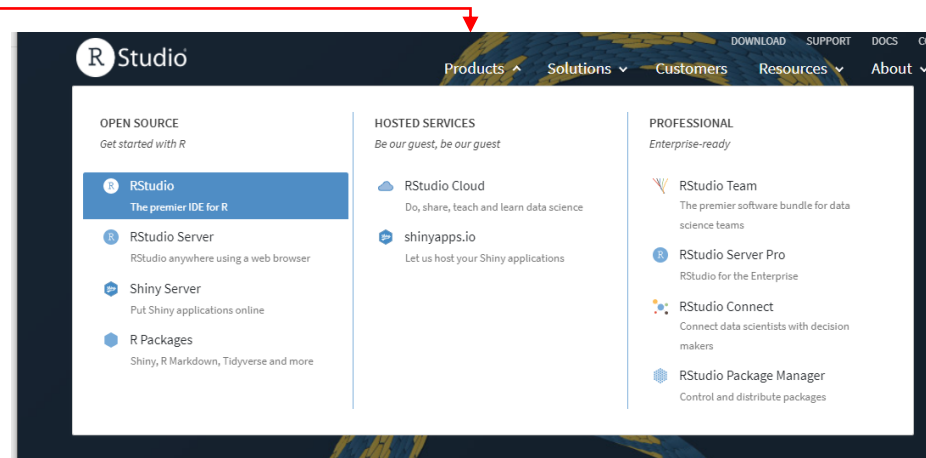
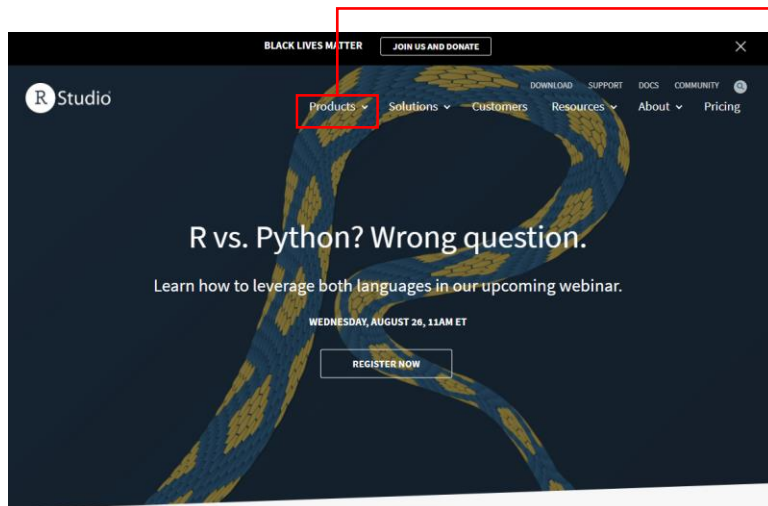
- Available OS: Windows, Mac, or Linux
- Can run it over the web using RStudio Server



Install RStudio

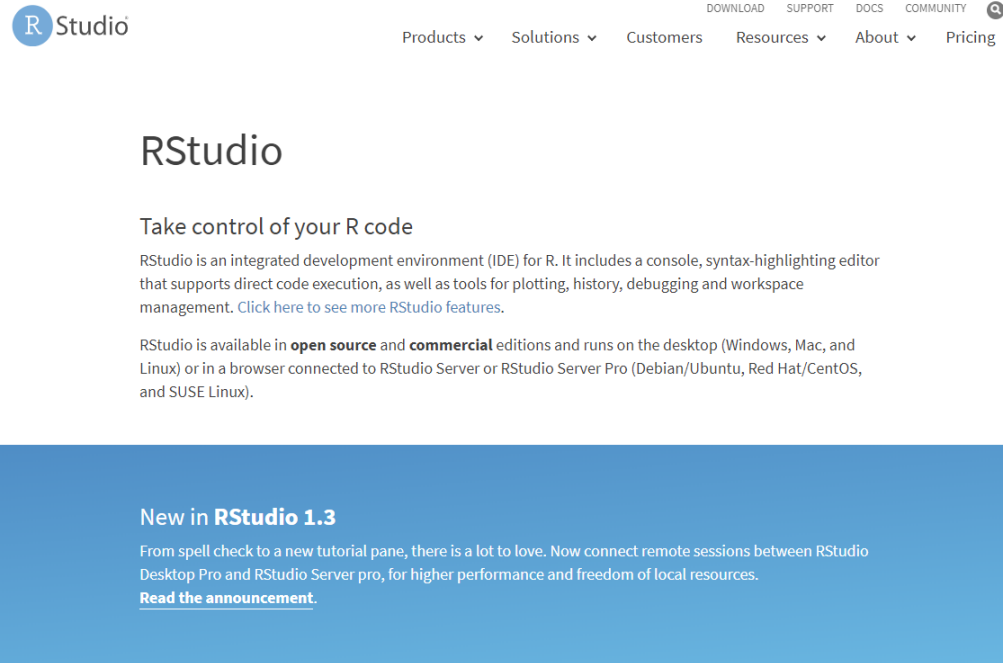


✓ <https://www.rstudio.com/>



Install RStudio

- Download RStudio Desktop



The screenshot shows the RStudio website. At the top is the RStudio logo and a navigation bar with links: Products, Solutions, Customers, Resources, About, and Pricing. Below the navigation bar is the heading "RStudio" followed by the subheading "Take control of your R code". The main text describes RStudio as an integrated development environment (IDE) for R, including a console, syntax-highlighting editor, and tools for plotting, history, debugging, and workspace management. It also mentions that RStudio is available in open source and commercial editions and runs on the desktop (Windows, Mac, and Linux) or in a browser connected to RStudio Server or RStudio Server Pro. A blue banner at the bottom of the screenshot announces "New in RStudio 1.3" and mentions features like spell check, a new tutorial pane, and remote session connectivity.

RStudio

Take control of your R code

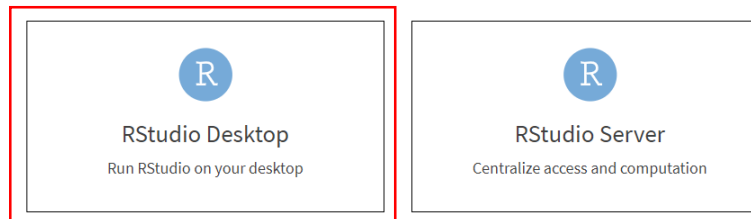
RStudio is an integrated development environment (IDE) for R. It includes a console, syntax-highlighting editor that supports direct code execution, as well as tools for plotting, history, debugging and workspace management. [Click here to see more RStudio features.](#)

RStudio is available in **open source** and **commercial** editions and runs on the desktop (Windows, Mac, and Linux) or in a browser connected to RStudio Server or RStudio Server Pro (Debian/Ubuntu, Red Hat/CentOS, and SUSE Linux).

New in RStudio 1.3

From spell check to a new tutorial pane, there is a lot to love. Now connect remote sessions between RStudio Desktop Pro and RStudio Server pro, for higher performance and freedom of local resources. [Read the announcement.](#)

There are two versions of RStudio:



The image shows two boxes side-by-side. The left box is titled "RStudio Desktop" and has the subtitle "Run RStudio on your desktop". The right box is titled "RStudio Server" and has the subtitle "Centralize access and computation". Both boxes feature the R logo at the top. The left box is highlighted with a red border.

RStudio Desktop
Run RStudio on your desktop

RStudio Server
Centralize access and computation

Install RStudio

- Choose RStudio Desktop FREE version



	Open Source Edition	RStudio Desktop Pro
Overview	<ul style="list-style-type: none">• Access RStudio locally• Syntax highlighting, code completion, and smart indentation• Execute R code directly from the source editor• Quickly jump to function definitions• Easily manage multiple working directories using projects• Integrated R help and documentation• Interactive debugger to diagnose and fix errors quickly• Extensive package development tools	<p>All of the features of open source; plus:</p> <ul style="list-style-type: none">• A commercial license for organizations not able to use AGPL software• Access to priority support• RStudio Professional Drivers• Connect directly to your RStudio Server Pro instance remotely
Support	Community forums only	<ul style="list-style-type: none">• Priority Email Support• 8 hour response during business hours (ET)
License	AGPL v3	RStudio License Agreement
Pricing	Free	\$995/year
	DOWNLOAD RSTUDIO DESKTOP	DOWNLOAD FREE RSTUDIO DESKTOP PRO TRIAL

[Purchase](#) | [Contact Sales](#)

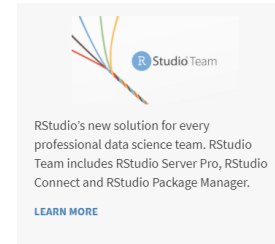
Install RStudio

- Choose RStudio Desktop FREE version

Choose Your Version

RStudio is a set of integrated tools designed to help you be more productive with R. It includes a console, syntax-highlighting editor that supports direct code execution, and a variety of robust tools for plotting, viewing history, debugging and managing your workspace.

[LEARN MORE ABOUT RSTUDIO FEATURES](#)



	RStudio Desktop Open Source License	RStudio Desktop Commercial License	RStudio Server Open Source License	RStudio Server Pro Commercial License
	Free	\$995 /year	Free	\$4,975 /year (5 Named Users)
	DOWNLOAD Learn more	BUY Learn more	DOWNLOAD Learn more	BUY Evaluation Learn more
Integrated Tools for R	✓	✓	✓	✓
Priority Support		✓		✓
Access via Web Browser			✓	✓
Enterprise Security				✓
Project Sharing				✓
Manage Multiple R Sessions & Versions				✓
Admin Dashboard				✓
Load Balancing				✓
Auditing and Monitoring				✓
Data Connectivity				✓
Launcher				✓
Tutorial API				✓
License	AGPL	Commercial	AGPL	Commercial

Install RStudio

- Choose RStudio Desktop FREE version

RStudio Desktop 1.3.1073 - [Release Notes](#)










1. Install R. RStudio requires R 3.0.1+.
2. Download RStudio Desktop. Recommended for your system:



All Installers

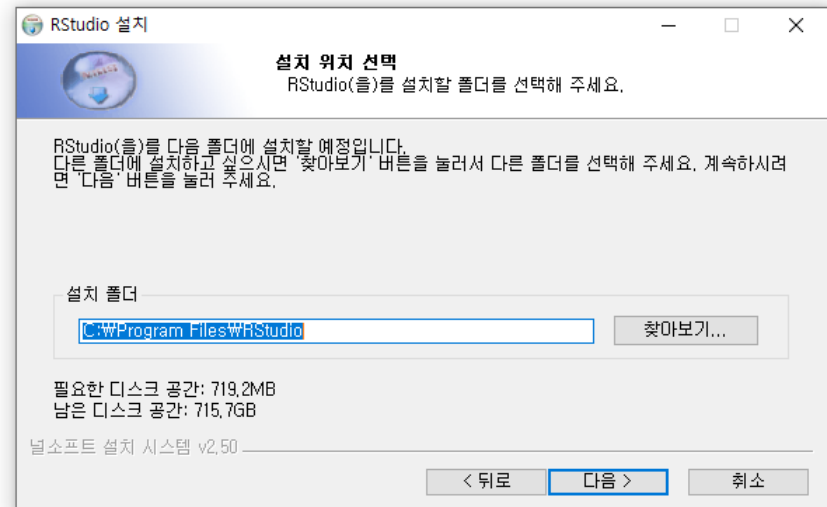
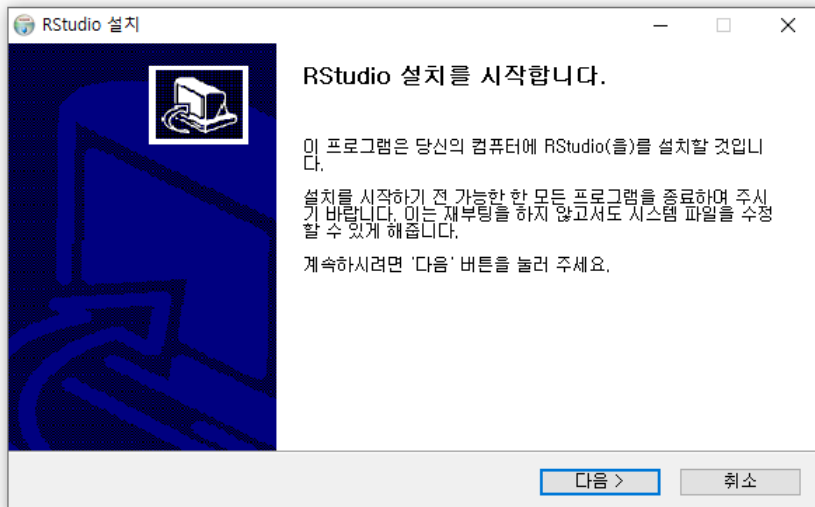
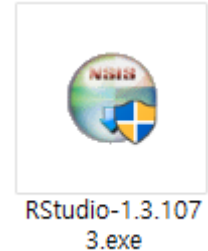
Linux users may need to [import RStudio's public code-signing key](#) prior to installation, depending on the operating system's security policy.

RStudio requires a 64-bit operating system. If you are on a 32 bit system, you can use an [older version of RStudio](#).

OS	Download	Size	SHA-256
Windows 10/8/7	 RStudio-1.3.1073.exe	171.62 MB	2fe472a
macOS 10.13+	 RStudio-1.3.1073.dmg	148.66 MB	0878b305
Ubuntu 16	 rstudio-1.3.1073-amd64.deb	124.07 MB	6d71c5ff
Ubuntu 18/Debian 10	 rstudio-1.3.1073-amd64.deb	126.78 MB	86be9352
Fedora 19/Red Hat 7	 rstudio-1.3.1073-x86_64.rpm	146.95 MB	01abb3d8
Fedora 28/Red Hat 8	 rstudio-1.3.1073-x86_64.rpm	151.04 MB	4b4e4878
Debian 9	 rstudio-1.3.1073-amd64.deb	126.98 MB	0226bbc2
SLES/OpenSUSE 12	 rstudio-1.3.1073-x86_64.rpm	119.43 MB	7c1a6f2c
OpenSUSE 15	 rstudio-1.3.1073-x86_64.rpm	128.39 MB	29078f11

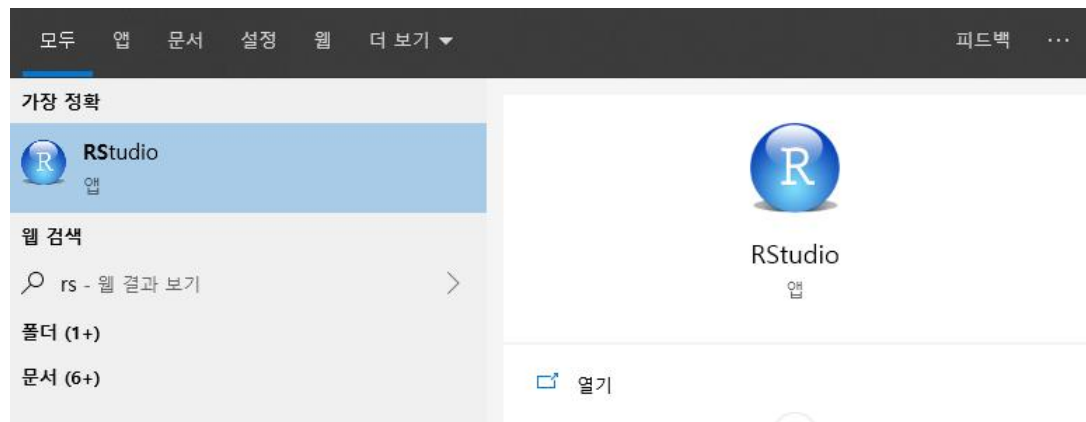
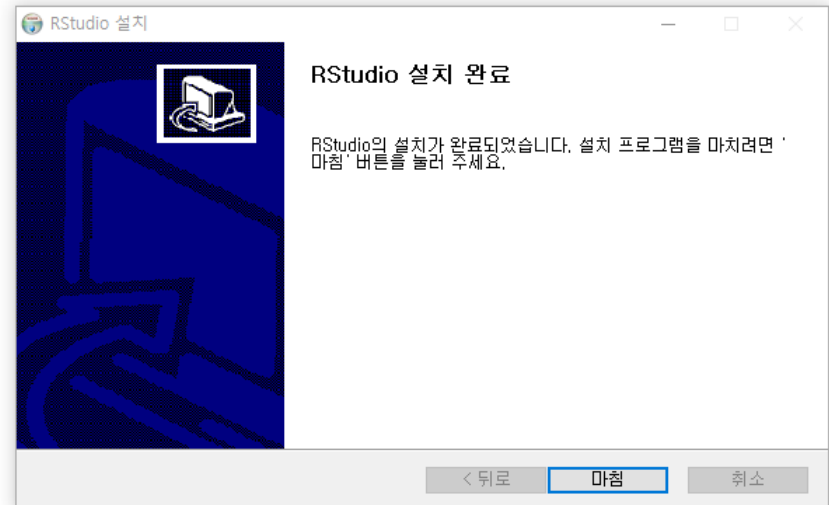
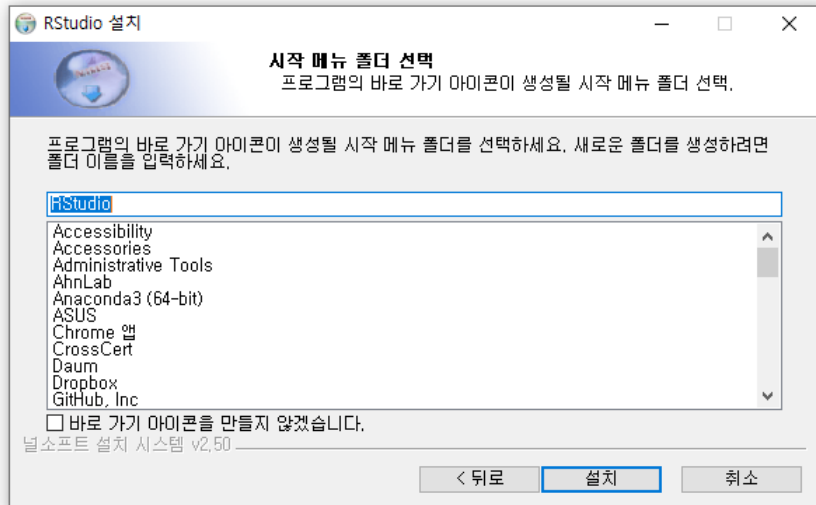
Install RStudio

- Run “Rstudio-1.3.1073.exe” file (If possible, as an administrator)
 - ✓ Click next
 - ✓ Set the installation folder



Install RStudio

- Choose the Start Menu folder and complete installation



Install RStudio

- Run RStudio

The screenshot shows the RStudio desktop environment with four main panels and several annotations:

- Source Editor (Top Left):** A blue panel for editing R scripts. Annotation: "View & Edit R Script", "View Data".
- Environment (Top Right):** A yellow panel showing the current environment. Annotation: "Store Data & Variables", "Store Past Instructions".
- Console (Bottom Left):** A green panel for running R commands and viewing output. Annotation: "Type Instructions", "Display Outputs".
- Files/Plots/Packages/Help/Viewer (Bottom Right):** A red panel for managing files and packages. Annotation: "Package Activation", "View Plots", "Help Documents", "File Navigation".

The Console panel displays the following text:

```
R version 3.6.1 (2019-07-05) -- "Action of the Toes"
Copyright (C) 2019 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> |
```

The Packages panel shows the following table:

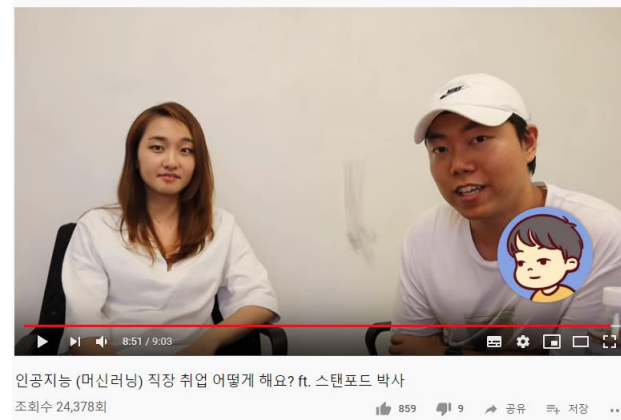
Name	Description	Version
<input checked="" type="checkbox"/> base	The R Base Package	3.6.1
<input type="checkbox"/> boot	Bootstrap Functions (Originally by Angelo Canty for S)	1.3-22
<input type="checkbox"/> class	Functions for Classification	7.3-15
<input type="checkbox"/> cluster	"Finding Clusters in Data": Cluster Analysis Extended by Rousseeuw et al.	2.1.0
<input type="checkbox"/> codetools	Code Analysis Tools for R	0.2-16
<input type="checkbox"/> compiler	The R Compiler Package	3.6.1
<input checked="" type="checkbox"/> datasets	The R Datasets Package	3.6.1
<input type="checkbox"/> foreign	Import/Export Stored External Data (CSV, SAS, etc.)	0.8-71
<input checked="" type="checkbox"/> graphics	The R Graphics Package	3.6.1
<input checked="" type="checkbox"/> grDevices	The R Graphics Device and Fonts for Fonts and Fonts	3.6.1
<input type="checkbox"/> grid	The Grid Graphics Package	3.6.1
<input type="checkbox"/> KernSmooth	Functions for Kernel Smoothing Supporting Wand & Jones (1995)	2.23-15
<input type="checkbox"/> lattice	Trellis Graphics for R	0.20-38
<input type="checkbox"/> MASS	Support Functions and Datasets for Venables and Ripley's MASS	7.3-51.4
<input type="checkbox"/> Matrix	Sparse and Dense Matrix Classes and Methods	1.2-17

The Three Sexy Skills of Data Geeks

- Statistics (Studying)
 - ✓ The most important skill and the hardest to learn
 - ✓ Deep and rigorous discipline and actively progressing
- Data Munging (Suffering)
 - ✓ The painful process of cleaning, parsing, and proofing one's data before it's suitable for analysis
 - ✓ Real world data is messy!!
- Visualization (Storytelling)
 - ✓ exploratory data visualizations: intended to facilitate a data analyst's understanding of the data
 - ✓ communicate to a wider audience, whose goal is to visually advocate for a hypothesis

Reading List

- Reading list I: A very short history of data science
 - ✓ <https://www.forbes.com/sites/gilpress/2013/05/28/a-very-short-history-of-data-science/#5376e6a655cf>
- Watch List I & 2
 - ✓ 머신러닝, 딥러닝, 빅데이터가 도대체 뭐야?
 - <https://www.youtube.com/watch?v=-tmypCjhfkE&t=2s>
 - ✓ 인공지능 (머신러닝) 직장 취업 어떻게 해요?
 - <https://www.youtube.com/watch?v=PX4Kzoxdbgo>



References

- R Datamining

✓ <http://www.rdatamining.com>

RDM RDataMining.com: R and Data Mining

Home
Resource News
Seminar and Conference News
Job News
Training
R and Data Mining Course
Past Trainings and Talks
Tutorial at AusDM 2018
Tutorial at Melbourne Data Science Week
Short Course at University of Canberra
Machine Learning 102 Workshop at SP Jain

Documents
Introduction to Data Mining with R
R Reference Card for Data Mining
R and Data Mining: Examples and Case Studies
Introduction to Data Mining with R and Data Import/Export in R
Data Exploration and Visualization with R
Regression and Classification with R
Data Clustering with R
Association Rule Mining with R
Text Mining with R
Twitter Data Analysis with R
Time Series Analysis and Mining with R

Examples
Data Exploration
Decision Trees
Random Forest
k-means Clustering
Hierarchical Clustering
Outlier Detection
Time Series Forecasting
Time Series Analysis
Time Series Clustering and Classification
Association Rules
Text Mining
Twitter Follower Map
Social Network Analysis
Multidimensional Scaling (MDS)
Principal Component Analysis (PCA)
Parallel Computing
Other Examples

Big Data
Big Data Platforms
Big Data Resources
Step-by-Step Guide to Setting Up an R-Hadoop System
Building an R Hadoop System
Hadoop: from Single-Node Mode to Cluster Mode

Resources
Online Documents, Books and Tutorials
Free Online Courses
Data Mining Tutorials
Free Datasets

Datasets
Free Data Mining Tools

Books
R and Data Mining: Examples and Case Studies
Data Mining Applications with R
Post-Mining of Association Rules
R Package for Data Mining
What is R
Donation & Supporters
Sponsorship and Advertisement
Sponsors
About RDataMining

Learn Data Science Online.

This website presents documents, examples, tutorials and resources on R and data mining.

Documents on Data Mining with R

- R Reference Card for Data Mining
- R and Data Mining: Examples and Case Studies
- Introduction to Data Mining with R
- RDataMining slides series on
 - Introduction to Data Mining with R and Data Import/Export in R
 - Data Exploration and Visualization with R
 - Regression and Classification with R
 - Data Clustering with R
 - Association Rule Mining with R
 - Text Mining with R: Twitter Data Analysis, and
 - Time Series Analysis and Mining with R

Examples on Data Mining with R

- data exploration
- decision trees
- k-means clustering and hierarchical clustering
- outlier detection
- time series decomposition and forecasting
- time series clustering and classification
- association rules
- text mining
- social network analysis
- Multidimensional Scaling (MDS)
- parallel computing
- many examples from other websites

Big Data Tutorials and Resources

- big data platforms and their interfaces with R
- step-by-step guide to setting up an R-Hadoop system
- building an R Hadoop system
- Hadoop: from single-node mode to cluster mode

Resources on R and Data Mining

- free online documents, tutorials and slides
- free online courses
- free datasets
- open-source tools

News on Courses, Jobs and Resources

- current online courses on data science and analytics
- latest data science and analytics jobs
- new resources on data science and analytics

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DataCamp
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Canberra Data Scientists

Place your ad here

News

AusDM 2019 submission deadline extended to 12 August Conference URL: <https://ausdm19.ausdm.org/>
Posted Jul 21, 2019, 10:32 PM by Yanchang Zhao

CFP: The 17th Australasian Data Mining Conference (AusDM 2019)
The Australasian Data Mining Conference has established itself as the premier Australasian meeting for both practitioners and researchers in data mining. It is devoted to the art and science of ...
Posted Apr 11, 2019, 11:37 PM by Yanchang Zhao

Showing posts 1 - 2 of 116. [View more »](#)

Surprises belong to the past
PRTG lets you monitor 100 sensors for free. There's no harm in trying. PRTG Network Monitor

DOWNLOAD

References

- R Bloggers

✓ <http://r-bloggers.com>

The screenshot shows the R-bloggers website. At the top, the logo "R-bloggers" is displayed in blue, with "R" in a stylized font. To the right, it says "R-BLOGGERS" and "R news and tutorials contributed by hundreds of R bloggers". Below the logo is a navigation bar with links: HOME, ABOUT, RSS, ADD YOUR BLOG!, LEARN R, R JOBS, and CONTACT US. On the right side, there is a search bar with the text "Search R-bloggers.." and a "Go" button. Below the search bar is a subscription section with the text "Your e-mail here", a "Subscribe" button, and "52793 readers". There is also a Twitter follow button for "@rbloggers" with "87.2K followers". Below that is a Facebook like button for "R bloggers" with "79K likes". The main content area features four article previews. The first article is "Data manipulation in r using data frames - an extensive article of basics" by dataenq, dated August 23, 2020. The second article is "Sketchy, Hand-drawn-like Networks in R" by schochastics, dated August 22, 2020. The third article is "Lines of best fit by @ellis2013nz" by free range statistics - R, dated August 22, 2020. The fourth article is "Shiny in Production: App and Database Syncing" by R on Thomas Roh, dated August 21, 2020. On the right side, there is a section for "Most viewed posts (weekly)" listing five articles: "5 Ways to Subset a Data Frame in R", "How to create an API for your R code", "Graphics in R with ggplot2", "Benford's Law: Applying to Existing Data", and "How to write the first for loop in R". Below this is a "Sponsors" section with three logos: "R Training and Consultancy Services" (Thrivon on Data Science), "mangothecat" (mango-solutions.com), and "DataCamp".

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How to create an API for your R code
Graphics in R with ggplot2
Benford's Law: Applying to Existing Data
How to write the first for loop in R

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MANGO SOLUTIONS

DataCamp

Data manipulation in r using data frames - an extensive article of basics
August 23, 2020 | dataenq
Introduction As per lexico.com the word manipulate means "Handle or control (a tool, mechanism, etc.), typically in a skilful manner". Data manipulation is an exercise of skillfully clearing issues from the data and resulting in clean and tidy data. What is the need for data manipulation? In real-life, data ... [Read more...]

Sketchy, Hand-drawn-like Networks in R
August 22, 2020 | schochastics
This post introduces the R package rougnet, which wraps the java script library rough.js to draw sketchy, hand-drawn-like networks. From all my network packages, this is probably the most useless but most fun one I developed. The package is so far only available on github, but it already has ... [Read more...]

Lines of best fit by @ellis2013nz
August 22, 2020 | free range statistics - R
A couple of months ago my Twitter feed featured several mass-participation stern critiques laced with sneering and mockery (aka "Twitter pile-ons") for some naive regression modelling in the form of lines of best fit through scatter plots. All of t... [Read more...]

Shiny in Production: App and Database Syncing
August 21, 2020 | R on Thomas Roh
When using shiny in production, often you will want to have some sort of database interactions for storing and accessing data. The DBI package provides an easy way to do the database interactions with a variety of SQL database flavors. In this example, I'm going to use a SQLite ... [Read more...]

References

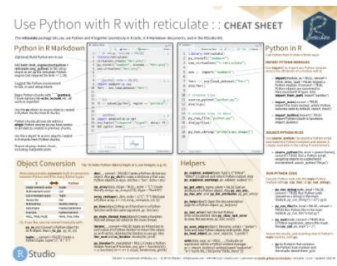
- RStudio Cheat Sheet

✓ <https://rstudio.com/resources/cheatsheets/>

Python with R and Reticulate Cheatsheet

The `reticulate` package provides a comprehensive set of tools for interoperability between Python and R. With `reticulate`, you can call Python from R in a variety of ways including importing Python modules into R scripts, writing R Markdown Python chunks, sourcing Python scripts, and using Python interactively within the RStudio IDE. This cheatsheet will remind you how. Updated March 19.

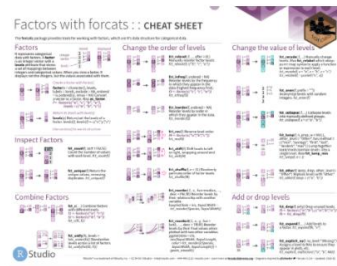
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Factors with forcats Cheatsheet

Factors are R's data structure for categorical data. The `forcats` package makes it easy to work with factors. This cheatsheet reminds you how to make factors, reorder their levels, recode their values, and more. Updated February 19.

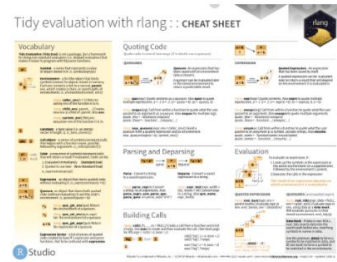
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Tidy Evaluation with rlang Cheatsheet

Tidy Evaluation (Tidy Eval) is a framework for doing non-standard evaluation in R that makes it easier to program with tidyverse functions. Non-standard evaluation, better thought of as “delayed evaluation,” lets you capture a user's R code to run later in a new environment or against a new data frame. The tidy evaluation framework is implemented by the `rlang` package and used by functions throughout the tidyverse. Updated November 18.

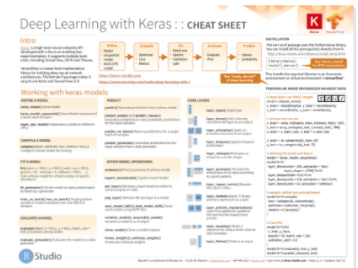
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Deep Learning with Keras Cheatsheet

Keras is a high-level neural networks API developed with a focus on enabling fast experimentation. Keras supports both convolution based networks and recurrent networks (as well as combinations of the two), runs seamlessly on both CPU and GPU devices, and is capable of running on top of multiple back-ends including TensorFlow, CNTK, and Theano. Updated December 17.

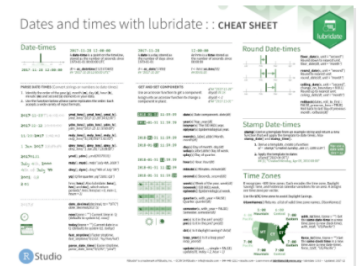
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Dates and Times Cheatsheet

`Lubridate` makes it easier to work with dates and times in R. This `lubridate` cheatsheet covers how to round dates, work with time zones, extract elements of a date or time, parse dates into R and more. The back of the cheatsheet describes `lubridate`'s three timespan classes: periods, durations, and intervals; and explains how to do math with date-times. Updated December 17.

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Work with Strings Cheatsheet

The `stringr` package provides an easy to use toolkit for working with strings, i.e. character data, in R. This cheatsheet guides you through `stringr`'s functions for manipulating strings. The back page provides a concise reference to *regular expressions*, a mini-language for describing, finding, and matching patterns in strings. Updated October 17.

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