

# Introduction to packages

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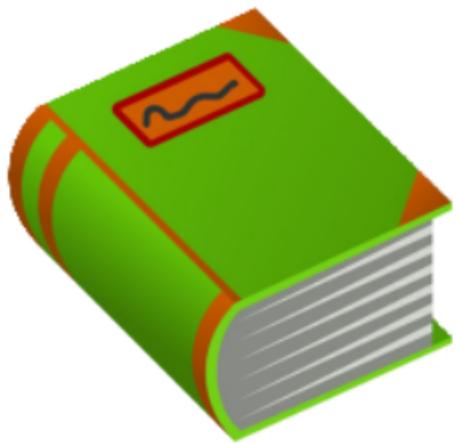


Introduction to R



Package

=





# GitHub

bioconductor  
bioconductor  
bioconductor

## CRAN Task Views

<a href="#">Bayesian</a>	Bayesian Inference
<a href="#">ChemPhys</a>	Chemometrics and Computational Physics
<a href="#">ClinicalTrials</a>	Clinical Trial Design, Monitoring, and Analysis
<a href="#">Cluster</a>	Cluster Analysis & Finite Mixture Models
<a href="#">DifferentialEquations</a>	Differential Equations
<a href="#">Distributions</a>	Probability Distributions
<a href="#">Econometrics</a>	Econometrics
<a href="#">Environmetrics</a>	Analysis of Ecological and Environmental Data
<a href="#">ExperimentalDesign</a>	Design of Experiments (DoE) & Analysis of Experimental Data
<a href="#">ExtremeValue</a>	Extreme Value Analysis
<a href="#">Finance</a>	Empirical Finance
<a href="#">FunctionalData</a>	Functional Data Analysis
<a href="#">Genetics</a>	Statistical Genetics
<a href="#">Graphics</a>	Graphic Displays & Dynamic Graphics & Graphic Devices & Visualization
<a href="#">HighPerformanceComputing</a>	High-Performance and Parallel Computing with R
<a href="#">MachineLearning</a>	Machine Learning & Statistical Learning
<a href="#">MedicalImaging</a>	Medical Image Analysis
<a href="#">MetaAnalysis</a>	Meta-Analysis
<a href="#">Multivariate</a>	Multivariate Statistics
<a href="#">NaturalLanguageProcessing</a>	Natural Language Processing
<a href="#">NumericalMathematics</a>	Numerical Mathematics

## Task View

Search all 14,381 CRAN, BioConductor and Github packages.

Or explore packages in one of the [Task Views](#).

[Bayesian](#)[ChemPhys](#)[ClinicalTrials](#)[Cluster](#)[DifferentialEquations](#)[Distributions](#)[Econometrics](#)[Environmetrics](#)[ExperimentalDesign](#)[Finance](#)[Genetics](#)

```
install.packages("ggplot2")
```

```
install.packages(c("ggplot2", "devtools", "lme4"))
```



RStudio

File Edit Code View Plots Session Build Debug Profile



Go to file/function

Tools Help

Install Packages...

Check for Package Updates...

Version Control

Shell...

Terminal

Addins

Keyboard Shortcuts Help

Alt+Shift+K

Modify Keyboard Shortcuts...

Project Options...

Global Options...

## Install Packages

Install from:

[? Configuring Repositories](#)

Repository (CRAN, CRANextra)

Packages (separate multiple with space or comma):

Install to Library:

C:/Users/Sarah\_2/Documents/R/win-library/3.3 [Default]

Install dependencies

Install

Cancel



```
source("https://bioconductor.org/biocLite.R")
biocLite()
biocLite("GenomicFeatures")
```

# GitHub

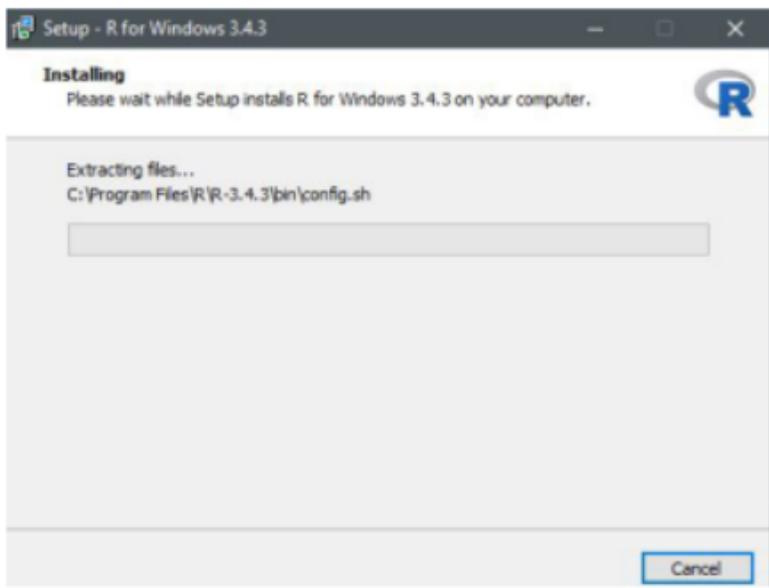
```
install.packages("devtools")
```

```
library(devtools)
```

```
install_github("author/package")
```

## Step 1: Install

```
install.packages("ggplot2")
```



## Step 2: Load

```
library()
```

```
library(ggplot2)
```



R.exe

Files Plots Packages Help Viewer

Install Update Packrat

Name Description Version

User Library

<input type="checkbox"/>	abind	Combine Multidimensional Arrays	1.4-5
<input type="checkbox"/>	acepack	ACE and AVAS for Selecting Multiple Regression Transformations	1.4.1
<input checked="" type="checkbox"/>	ade4	Analysis of Ecological Data : Exploratory and Euclidean Methods in Environmental Sciences	1.7-8
<input type="checkbox"/>	AnnotationDbi	Annotation Database Interface	1.36.2
<input type="checkbox"/>	ari	Automated R Instructor	0.1.0
<input type="checkbox"/>	assertthat	Easy Pre and Post Assertions	0.2.0
<input type="checkbox"/>	aws.iam	AWS IAM Client Package	0.1.7
<input type="checkbox"/>	aws.polly	Client for AWS Polly	0.1.2
<input type="checkbox"/>	aws.s3	AWS S3 Client Package	0.3.3
<input type="checkbox"/>	aws.signature	Amazon Web Services Request Signatures	0.3.5
<input type="checkbox"/>	backports	Reimplementations of Functions Introduced Since R-3.0.0	1.1.1
<input type="checkbox"/>	base64enc	Tools for base64 encoding	0.1-3
<input type="checkbox"/>	BB	Solving and Optimizing Large-Scale Nonlinear Systems	2014.10-1
<input type="checkbox"/>	bedr	Genomic Region Processing using Tools Such as BEDtools, BEDOPS and Tabix	1.0.3
<input type="checkbox"/>	BH	Boost C++ Header Files	1.65.0-1
<input type="checkbox"/>	bindr	Parametrized Active Bindings	0.1
<input type="checkbox"/>	bindrcpp	An 'Rcpp' Interface to Active Bindings	0.2
<input type="checkbox"/>	Biobase	Biobase: Base functions for Bioconductor	2.34.0
<input type="checkbox"/>	BiocGenerics	S4 generic functions for Bioconductor	0.20.0
<input type="checkbox"/>	BiocInstaller	Install/Update Bioconductor, CRAN, and github Packages	1.24.0

# What packages are installed?

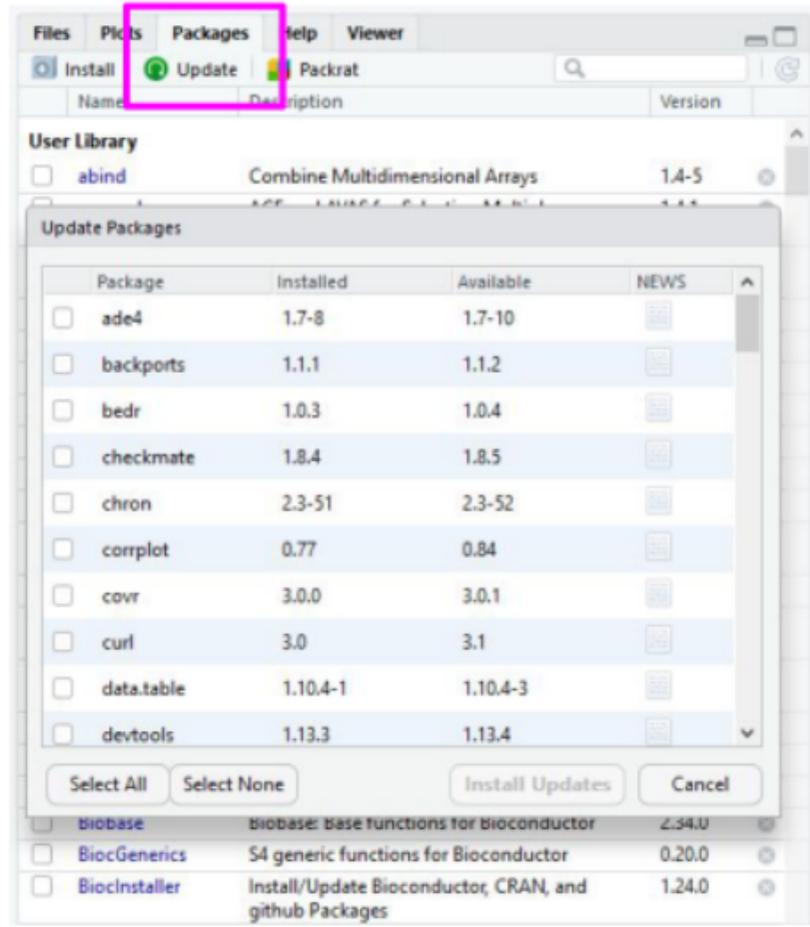
`installed.packages()` or `library()`

## Updating packages

`old.packages()`

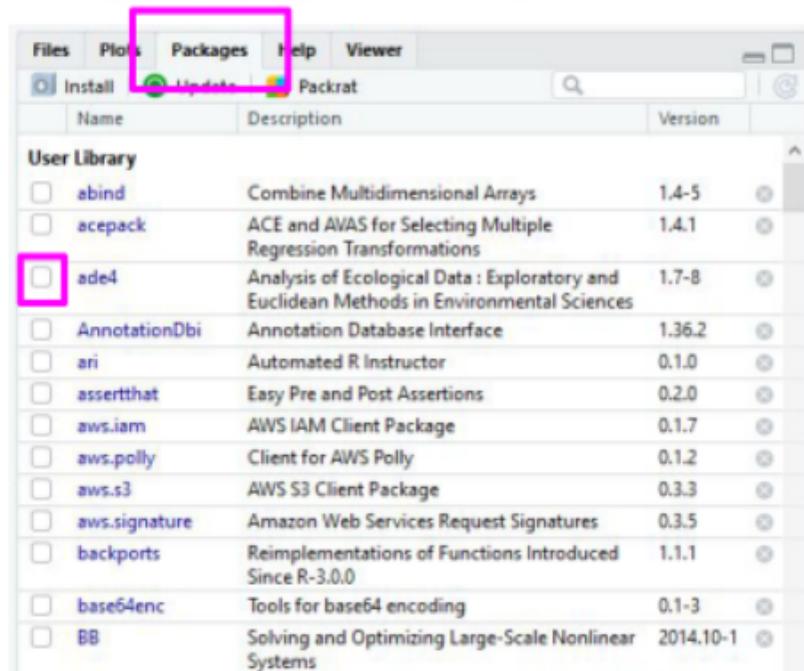
`update.packages()`

`install.packages("packagename")`



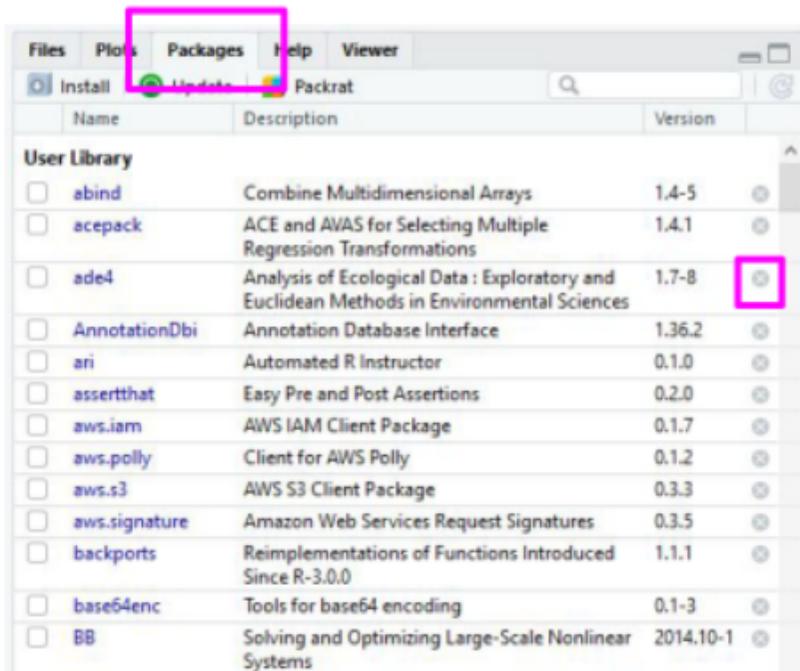
# detach()

```
detach("package:ggplot2", unload=TRUE)
```



```
remove.packages()
```

```
remove.packages("ggplot2")
```



The screenshot shows the RStudio interface with the 'Packages' tab selected, highlighted by a pink rectangle. A search bar and a 'Packrat' button are visible above the table. The table lists packages in the 'User Library' with columns for Name, Description, and Version. The 'ade4' package is selected for removal, indicated by a pink square around its row.

Name	Description	Version	Action
<b>User Library</b>			
<input type="checkbox"/> abind	Combine Multidimensional Arrays	1.4-5	<input type="radio"/>
<input type="checkbox"/> acepack	ACE and AVAS for Selecting Multiple Regression Transformations	1.4.1	<input type="radio"/>
<input type="checkbox"/> ade4	Analysis of Ecological Data : Exploratory and Euclidean Methods in Environmental Sciences	1.7-8	<input checked="" type="radio"/>
<input type="checkbox"/> AnnotationDbi	Annotation Database Interface	1.36.2	<input type="radio"/>
<input type="checkbox"/> ari	Automated R Instructor	0.1.0	<input type="radio"/>
<input type="checkbox"/> assertthat	Easy Pre and Post Assertions	0.2.0	<input type="radio"/>
<input type="checkbox"/> aws.iam	AWS IAM Client Package	0.1.7	<input type="radio"/>
<input type="checkbox"/> aws.polly	Client for AWS Polly	0.1.2	<input type="radio"/>
<input type="checkbox"/> aws.s3	AWS S3 Client Package	0.3.3	<input type="radio"/>
<input type="checkbox"/> aws.signature	Amazon Web Services Request Signatures	0.3.5	<input type="radio"/>
<input type="checkbox"/> backports	Reimplementations of Functions Introduced Since R-3.0.0	1.1.1	<input type="radio"/>
<input type="checkbox"/> base64enc	Tools for base64 encoding	0.1-3	<input type="radio"/>
<input type="checkbox"/> BB	Solving and Optimizing Large-Scale Nonlinear Systems	2014.10-1	<input type="radio"/>

```
R version 3.4.3 (2017-11-30) -- "Kite-Eating Tree"  
Copyright (c) 2017 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.
```

```
> |
```

version

sessionInfo()

```
help()
```

```
help(package = "ggplot2")
```

The screenshot shows the RStudio interface with the 'Packages' tab highlighted by a pink rectangle. Below the tabs, there are three buttons: 'Install', 'Update' (which is green), and 'Uninstall'. A search bar and a refresh icon are also present. The main area displays a table titled 'User Library' with columns for Name, Description, and Version. The 'ade4' package is highlighted with a pink rectangle. The table data is as follows:

Name	Description	Version
abind	Combine Multidimensional Arrays	1.4-5
acepack	ACE and AVAS for Selecting Multiple Regression Transformations	1.4.1
<b>ade4</b>	Analysis of Ecological Data : Exploratory and Euclidean Methods in Environmental Sciences	1.7-8
AnnotationDbi	Annotation Database Interface	1.36.2
ari	Automated R Instructor	0.1.0
assertthat	Easy Pre and Post Assertions	0.2.0
aws.iam	AWS IAM Client Package	0.1.7
aws.polly	Client for AWS Polly	0.1.2
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base64enc	Tools for base64 encoding	0.1-3
BB	Solving and Optimizing Large-Scale Nonlinear Systems	2014.10-1

```
browseVignettes()
```

```
browseVignettes("ggplot2")
```

Vignettes found by "browseVignettes("ggplot2")"

Vignettes in package ggplot2

- Aesthetic specifications - [HTML](#) [source](#) [R code](#)
- Extending ggplot2 - [HTML](#) [source](#) [R code](#)