

Wie bekommt man Hilfe?

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Wie bekomme ich Hilfe?

- Um Hilfe im Allgemeinen zu bekommen:

```
help.start()
```

- Online-Dokumentation für die meisten Funktionen:

```
help(name)
```

- Benutze `?`, um Hilfe zu bekommen

```
?mean
```

- `example(lm)` liefert ein Beispiel für die lineare Regression

```
example(lm)
```

Vignetten

- Eine Vignette ist ein Papier, das die wichtigsten Funktionen eines Pakets darstellt.
- Sie enthalten viele reproduzierbare Beispiele.
- Vignetten sind ein neues Werkzeug, deshalb hat nicht jedes Paket eine Vignette.

`browseVignettes()`

- Um eine Vignette zu bekommen:

`vignette("osmdata")`

Ein Beispiel für eine Vignette - Das Paket `osmdata`

<https://cran.r-project.org/web/packages/osmdata/vignettes/osmdata.html>

1. Introduction

`osmdata` is an R package for downloading and using data from OpenStreetMap ([OSM](#)). OSM is a global open access mapping project, which is free and open under the [ODbL licence](#) [[@OpenStreetMap](#)]. This has many benefits, ensuring transparent data provenance and ownership, enabling real-time evolution of the database and, by allowing anyone to contribute, encouraging democratic decision making and citizen science [[@johnson_models_2017](#)]. See the [OSM wiki](#) to find out how to contribute to the world's open geographical data commons.

Unlike the [OpenStreetMap](#) package, which facilitates the download of raster tiles, `osmdata` provides access to the vector data underlying OSM.

`osmdata` can be installed from CRAN with

```
install.packages("osmdata")
```

and then loaded in the usual way:

```
library(osmdata)
```

```
## Data (c) openStreetMap contributors, ODbL 1.0. http://www.openstreetmap.org/copyright
```

The development version of `osmdata` can be installed with the `devtools` package using the following command:

```
devtools::install_github('osmdatar/osmdata')
```

Demos

- für manche Pakete gibt es Demos:

```
demo() # zeigt alle verfügbaren Demos
```

```
demo(package = "httr") # Zeigt alle Demos in einem Paket
```

```
# Ein spezifisches Demo laufen lassen:
```

```
demo("oauth1-twitter", package = "httr")
```

- Wenn ein Demo gestartet wird, ist der zugehörige Code in der Konsole sichtbar

```
demo(nlm)
```

```
> demo(nlm)
```

```
demo(nlm)
```

```
---- ~~~
```

Die Funktion apropos

- durchsucht alles über den angegebenen String:

```
apropos("lm")
```

```
## [1] ".colMeans"      ".lm.fit"         "colMeans"
## [4] "confint.lm"     "contr.helmert"   "dummy.coef.lm"
## [7] "getAllMethods"  "glm"             "glm.control"
## [10] "glm.fit"        "KalmanForecast"  "KalmanLike"
## [13] "KalmanRun"      "KalmanSmooth"    "kappa.lm"
## [16] "lm"             "lm.fit"          "lm.influence"
## [19] "lm.wfit"        "model.matrix.lm" "nlm"
## [22] "nlminb"         "predict.glm"     "predict.lm"
## [25] "residuals.glm"  "residuals.lm"    "summary.glm"
## [28] "summary.lm"
```

- Funktion kann auch mit **regulären Ausdrücken** verwendet werden...

Suchmaschine für die R-Seite

```
RSiteSearch("glm")
```

R Site Search

Query: [\[How to search\]](#)

Display: Description: Sort:

Target:

- ☒ Functions
- ☒ Task views

For problems WITH THIS PAGE (not with R) contact baron@upenn.edu.

Results:

References:

- **views:** [glm: 11]
- **vignettes:** [(can't open the index)]
- **functions:** [glm: 4391]

Total 4402 documents matching your query.

1. **R: Bias reduction in Binomial-response GLMs** (score: 299)

Nutzung von Suchmaschinen

- Ich nutze **duckduckgo.de**:

R-project + "was ich schon immer wissen wollte"

- das funktioniert natürlich für alle Suchmaschinen!



DuckDuckGo

R-project + "what I want to know" |



Stackoverflow

- Für alle Fragen zum programmieren
- Ist nicht auf R fokussiert - aber es gibt **viele Diskussionen zu R-Fragen**
- Sehr detaillierte Diskussionen

The screenshot shows the Stackoverflow homepage with the 'R' tag selected in the search bar. The 'Tagged Questions' section is active, displaying a list of questions. The top question is 'How to make a great R reproducible example?' with 1776 votes and 22 answers. To the right, there is a summary for the 'R Language' tag, showing 22,187 frequent questions tagged and a link to the documentation. Below this, the 'Related Tags' section lists other popular tags like 'ggplot2', 'dataframe', and 'plot'.

Stackoverflow Questions Jobs Documentation BETA Tags Users ? Log In Sign Up

Tagged Questions info newest **8** featured frequent votes active unanswered

R is a free, open-source programming language and software environment for statistical computing, bioinformatics, and graphics. Please supplement your question with a minimal reproducible example. Use `dput()` for data and specify all non-base packages with library calls. For statistical questions ...

[learn more...](#) [top users](#) [synonyms \(2\)](#) [r jobs](#)

1776 votes
22 answers
147k views

How to make a great R reproducible example?

When discussing performance with colleagues, teaching, sending a bug report or searching for guidance on mailing lists and here on SO, a reproducible example is often asked and always helpful. What ...

[r](#) [r-faq](#)

community wiki
11 revs, 8 users 54% Hack-R

22,187 frequent questions tagged
[about »](#)

R Language
DOCUMENTATION
[Find a request to handle or browse 121 topics.](#)

Related Tags

- [ggplot2](#) × 2875
- [dataframe](#) × 1351
- [plot](#) × 1105

Figure 1: Stackoverflow Beispiel

Ein Schummelzettel für Basis R

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

Base R Cheat Sheet

Getting Help

Accessing the help files

?mean
Get help of a particular function.
help.search('weighted mean')
Search the help files for a word or phrase.
help(package = 'dplyr')
Find help for a package.

More about an object

str(iris)
Get a summary of an object's structure.
class(iris)
Find the class an object belongs to.

Using Packages

install.packages('dplyr')
Download and install a package from CRAN.

library(dplyr)
Load the package into the session, making all its functions available to use.

dplyr::select
Use a particular function from a package.

data(iris)
Load a built-in dataset into the environment.

Vectors

Creating Vectors

| | | |
|--------------------------------|--------------------------|-----------------------------|
| <code>c(2, 4, 6)</code> | <code>2 4 6</code> | Join elements into a vector |
| <code>2:6</code> | <code>2 3 4 5 6</code> | An integer sequence |
| <code>seq(2, 3, by=0.5)</code> | <code>2.0 2.5 3.0</code> | A complex sequence |
| <code>rep(1:2, times=3)</code> | <code>1 2 1 2 1 2</code> | Repeat a vector |
| <code>rep(1:2, each=3)</code> | <code>1 1 1 2 2 2</code> | Repeat elements of a vector |

Vector Functions

| | |
|--|--|
| sort(x) Return x sorted. | rev(x) Return x reversed. |
| table(x) See counts of values. | unique(x) See unique values. |

Selecting Vector Elements

By Position

| | |
|-------------------------|----------------------------------|
| <code>x[4]</code> | The fourth element. |
| <code>x[-4]</code> | All but the fourth. |
| <code>x[2:4]</code> | Elements two to four. |
| <code>x[-(2:4)]</code> | All elements except two to four. |
| <code>x[c(1, 5)]</code> | Elements one and five. |

Programming

For Loop

```
for (variable in sequence){  
  Do something  
}
```

Example

```
for (i in 1:4){  
  j <- i + 10  
  print(j)  
}
```

While Loop

```
while (condition){  
  Do something  
}
```

Example

```
while (i < 5){  
  print(i)  
  i <- i + 1  
}
```

If Statements

```
if (condition){  
  Do something  
} else {  
  Do something different  
}
```

Example

```
if (i > 3){  
  print('Yes')  
} else {  
  print('No')  
}
```

Functions

```
function_name <- function(var){  
  Do something  
  return(new_variable)  
}
```

Example

```
square <- function(x){  
  squared <- x*x  
  return(squared)  
}
```

Reading and Writing Data

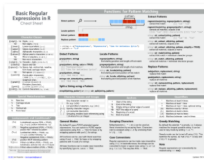
Also see the **readr** package.

| Input | Output | Description |
|--|--|---------------------------------------|
| <code>df <- read.table('file.txt')</code> | <code>write.table(df, 'file.txt')</code> | Read and write a delimited text file. |

Figure 2: Cheatsheet BaseR

Mehr Schummelzettel

Regular Expressions



Basics of regular expressions and pattern matching in R by Ian Kopacka. Updated 09/16.

DOWNLOAD

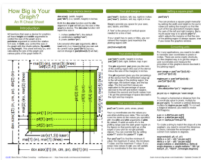
The leaflet package



Interactive maps in R with leaflet, by Keijia Shi. Updated 05/17.

DOWNLOAD

How big is your graph?



Graph sizing with base R by Stephen Simon. Updated 10/16.

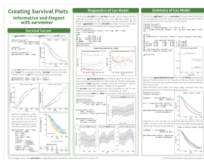
DOWNLOAD

The eurostat package



R tools to access the eurostat database, by rOpenGov. Updated 03/17.

The survminer package



Elegant survival plots, by Przemyslaw Biecek. Updated 03/17.

The sjmisc package



dplyr friendly Data and Variable Transformation, by Daniel Lüdtke.

Quick R

- Immer mit vielen Beispielen und Hilfen bezüglich eines Themas
- Beispiel: **Quick R - Getting Help**



Quick-R
powered by DataCamp

[R Tutorial](#) | [R Interface](#) | [Data Input](#) | [Data Management](#) | [Statistics](#) | [Advanced Statistics](#) | [Graphs](#) | [Advanced Graphs](#)

< R Interface

Getting Help

The Workspace

Input/Output

Packages

Graphic User Interfaces

Customizing Startup

Publication Quality Output

Batch Processing

Reusing Results

Getting Help

Once R is installed, there is a comprehensive built-in help system. At the program's command prompt you can use any of the following:

```
help.start()  # general help
help(foo)     # help about function foo
?foo         # same thing
apropos("foo") # list all functions containing string foo
example(foo)  # show an example of function foo
```

Weitere Links

- Überblick - wie bekommt man Hilfe in R



[\[Home\]](#)

Download

[CRAN](#)

Getting Help with R

Helping Yourself

Before asking others for help, it's generally a good idea for you to try to help yourself. R includes extensive facilities for accessing documentation and searching for help. There are also specialized search engines for accessing information about R on the internet, and general internet search engines can also prove useful ([see below](#)).

- Eine Liste mit HowTo's
- Eine Liste mit den wichtigsten R-Befehlen

Aufgabe A2A Hilfe bekommen

LABORATORY FOR APPLIED STATISTICS: Intro to R - Exercises für diese Aufgabe

- Versuchen Sie den Befehl `?which.min`. Dies öffnet eine Hilfeseite im unteren rechten Fenster von RStudio. Was macht die Funktion?
- Sie müssen den Namen der Funktion kennen, um die Hilfeseite wie oben beschrieben zu öffnen. Manchmal (oft, sogar) kennen Sie den Namen der R-Funktionen nicht; dann kann Ihnen eine **Suchmaschine** helfen. Versuchen Sie zum Beispiel, den Text `R minimum vector` zu suchen.