

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:

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

- findet alles, was den angegebenen String enthält:

```
apropos("nova")
```

```
## [1] "anova"           "manova"           "power.anova.t  
## [4] "stat.anova"      "summary.manova"
```

- Auch **reguläre Ausdrücken** können verwendet werden...

```
?"regular expression"
```

```
help.search("^glm")
```

- ?? ist ein Synonym für help.search

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.

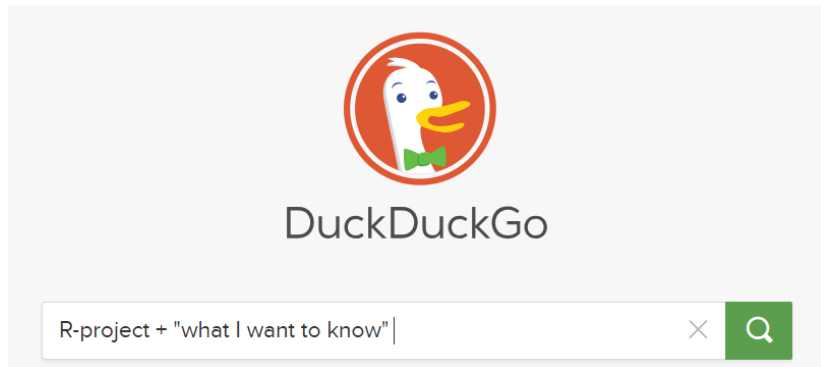
1. [R: Bias reduction in Binomial-response GLMs](#) (score: 299)

NUTZUNG VON SUCHMASCHINEN

- ▶ Ich nutze **duckduckgo.de**:

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

- ▶ das funktioniert natürlich für alle Suchmaschinen!



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 Stack Overflow homepage with the 'r' tag selected. 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. The page also features a search bar, navigation links, and a 'Related Tags' section on the right.

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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 ...

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1776 votes

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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 ...

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

22,187 frequent questions tagged

[ask question](#)

[r](#) [about »](#)

R Language
DOCUMENTATION

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

Related Tags

[ggplot2](#) × 2875

[dataframe](#) × 1351

[plot](#) × 1105

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

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

Vector Functions

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

Selecting Vector Elements

	By Position
x[4]	The fourth element.
x[-4]	All but the fourth.
x[2:4]	Elements two to four.
x[-(2:4)]	All elements except two to four.
x[c(1, 5)]	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.

MEHR SCHUMMELZETTEL

Regular Expressions



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

DOWNLOAD

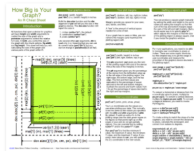
The leaflet package



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

DOWNLOAD

How big is your graph?



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

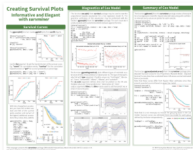
DOWNLOAD

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. Updated 08/17.

Quick R

- ▶ Viele Beispiele und Hilfe bezüglich eines Themas
- ▶ Beispiel: **Quick R - Getting Help**



[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 Hilfe bekommen

HILFE FÜR `which.min`

- ▶ Tippe den Befehl `?which.min` in die Konsole. Dies öffnet eine Hilfeseite im unteren rechten Fenster von RStudio. Wofür kann man die Funktion `which.min` nutzen?
- ▶ Der Name der Funktion muss bekannt sein, um die Hilfeseite so zu öffnen. Manchmal (oft, sogar) kennen man den Namen der R-Funktionen nicht; dann kann eine **Suchmaschine** helfen. Suche bspw. mit den Begriffen R `minimum vector`.
- ▶ Quelle: - LABORATORY FOR APPLIED STATISTICS: Intro to R - **Exercises**