

# Package: filters (via r-universe)

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**Type** Package

**Title** A ``Snake\_case" Filter System for R

**Version** 0.3.1

**Description** Enables filtering datasets by a prior specified identifiers which correspond to saved filter expressions.

**Imports** magrittr, plyr, yaml

**Suggests** dplyr, random.cdisc.data, testthat

**License** Apache License 2.0

**Encoding** UTF-8

**Language** en-US

**RoxygenNote** 7.3.1

**NeedsCompilation** no

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filters-package      *filters Package*

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### Description

Enables filtering datasets by a prior specified identifiers which correspond to saved filter expressions.

### Author(s)

**Maintainer:** Joe Zhu <joe.zhu@roche.com> [contributor]

Authors:

- Thomas Neitman (Original creator of the package)

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- F. Hoffmann-La Roche AG [copyright holder, funder]

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add\_filter      *Add a New Filter Definition*

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### Description

Add a new filter definition or overwrite an existing one

### Usage

```
add_filter(
  id,
  title,
  target,
  condition,
  character_only = FALSE,
  overwrite = FALSE
)
```

### Arguments

id	character	The id or name of this filter, e.g. "SE".
title	character	The title of the filter
target	character	The target dataset of the filter
condition		The filter condition
character_only	logical	Is condition a string? Defaults to FALSE.
overwrite	logical	Should existing filters be overwritten? Defaults to FALSE.

**Value**

The function returns a list of title, target and condition invisibly

**Author(s)**

Thomas Neitmann (neitmant)

**Examples**

```
add_filter(  
  id = "CTC5",  
  title = "Grade 5 Adverse Event",  
  target = "ADAE",  
  condition = AETOXGR == "5"  
)  
  
add_filter(  
  id = "CTC4",  
  title = "Grade 4 Adverse Event",  
  target = "ADAE",  
  condition = "AETOXGR == '4'",  
  character_only = TRUE  
)  
  
add_filter(  
  id = "IT",  
  title = "ITT Population",  
  target = "ADSL",  
  condition = ITTFL == "Y",  
  overwrite = TRUE  
)  
  
add_filter(  
  id = "5PER",  
  title = "Adverse Events with a Difference of at Least 5% between Treatment Arms",  
  target = "adae",  
  condition = 1 == 1,  
  overwrite = TRUE  
)
```

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apply\_filter

*Apply a Filter to a Dataset or List of Datasets*

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**Description**

Apply a Filter to a Dataset or List of Datasets

**Usage**

```
apply_filter(data, ...)

## Default S3 method:
apply_filter(data, ...)

## S3 method for class 'data.frame'
apply_filter(data, id, target = deparse(substitute(data)), verbose = TRUE, ...)

## S3 method for class 'list'
apply_filter(data, id, verbose = TRUE, ...)
```

**Arguments**

data	data.frame or list of data.frames
...	Not used.
id	character. The ID of a filter defined with add_filter()
target	character. The name of the dataset, e.g. ADSL or ADTTE
verbose	logical. Should informative messages be printed? Defaults to TRUE.

**Value**

A new data.frame or list of data.frames filtered based upon the condition defined for id

**Author(s)**

Thomas Neitmann (neitmant)

**Examples**

```
adsl <- random.cdisc.data::cadsl
adae <- random.cdisc.data::cadae
datasets <- list(adsl = adsl, adae = adae)

add_filter("REL", "Related AEs", "ADAE", AEREL == "Y", overwrite = TRUE)

apply_filter(adsl, "SE")
apply_filter(adae, "SER_REL")
apply_filter(datasets, "SER_REL_SE")
```

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get_filter	<i>Get a Filter Definition</i>
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**Description**

Get a Filter Definition

**Usage**

```
get_filter(id)
```

**Arguments**

id                    character. The filter ID

**Value**

A list with elements title, target and condition

**Author(s)**

Thomas Neitmann (neitmant)

**Examples**

```
get_filter("SE")
get_filter("SER")

## Filter `FOO` does not exist
try(get_filter("FOO"))
```

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get_filters	<i>Get Multiple Filter Definitions</i>
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**Description**

Get Multiple Filter Definitions

**Usage**

```
get_filters(ids)
```

**Arguments**

ids                    character. The filter IDs as a single string separated by underscores

**Value**

A named list of filter definitions

**Author(s)**

Thomas Neitmann (neitmant)

**Examples**

```
get_filters("REL_SER")  
get_filters("OS_IT")
```

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list_all_filters	<i>List All Filters</i>
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**Description**

List all available filters

**Usage**

```
list_all_filters()
```

**Value**

A data.frame with columns id, title, target and condition

**Author(s)**

Thomas Neitmann (neitmant)

**Examples**

```
list_all_filters()
```

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load_filters	<i>Load Filter Definitions</i>
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**Description**

Load filter definitions from a yaml file

**Usage**

```
load_filters(yaml_file, overwrite = FALSE)
```

**Arguments**

yaml_file	character. A path to a yaml file containing filter definitions
overwrite	logical. Should existing filter definitions be overwritten? Defaults to FALSE.

**Value**

On success, load\_filters() returns TRUE invisibly

**Author(s)**

Thomas Neitmann (neitmant)

**Examples**

```
filter_definitions <- system.file("filters.yaml", package = "filters")
if (interactive()) file.edit(filter_definitions)
load_filters(filter_definitions, overwrite = TRUE)
```

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