Package 'groupedHyperframe'

June 14, 2026

Type Package

Title Grouped Hyper Data Frame

Version 0.4.2

Date 2026-06-13

Description
To aggregate a hyper data frame, defined in the package 'spatstat.geom', according to a grouping structure. To facilitate downstream analysis based on a ``grouped'' hyper data frame. The author has retired from academic research. Accordingly, this package should not be considered a validated tool for use in peer-reviewed publications or as the basis for grant applications.

LazyData true

LazyDataCompression xz

Encoding UTF-8

License GPL-2

Language en-US

URL https://github.com/tingtingzhan/groupedHyperframe

Depends R (>= 4.6)

Imports cli, spatstat.geom

Suggests survival, spatstat.data

Config/roxygen2/version 8.0.0

Config/roxygen2/markdown TRUE

NeedsCompilation no

Author Tingting Zhan [aut, cre] (ORCID:
<https://orcid.org/0000-0001-9971-4844>)

Maintainer Tingting Zhan <tingtingzhan@gmail.com>

Repository CRAN

Date/Publication 2026-06-13 22:30:02 UTC

Contents

`groupedHyperframe-package`
groupedHyperframe: Grouped Hyper Data Frame

Description

To aggregate a hyper data frame, defined in the package 'spatstat.geom', according to a grouping structure. To facilitate downstream analysis based on a "grouped" hyper data frame. The author has retired from academic research. Accordingly, this package should not be considered a validated tool for use in peer-reviewed publications or as the basis for grant applications.

Author(s)

Maintainer: Tingting Zhan <tingtingzhan@gmail.com> (ORCID)

Authors:

- Tingting Zhan <tingtingzhan@gmail.com> (ORCID)

See Also

Useful links:

- https://github.com/tingtingzhan/groupedHyperframe

`aggregate.hyperframe` *Aggregate Hyper Data Frame*

Description

To aggregate a hyperframe.

Usage

```
## S3 method for class 'hyperframe'
aggregate(x, by, ...)
```

Arguments

x	hyperframe
by	two-sided formula, whose right-hand-side contains only the regular-column names of the input x
...	additional parameters of the function aggregate.data.frame, *except for* simplify

Value

The S3 method `aggregate.hyperframe()` returns a hyperframe.

Examples

```
spatstat.data::demohyper |>
 aggregate(by = . ~ Group, FUN = unique)

spatstat.data::flu |>
 aggregate(by = . - frameid ~ virustype:stain, FUN = unique)

spatstat.data::osteo |>
 aggregate(by = . - brick ~ shortid, FUN = unique)
```

---

aggregate2 *Aggregate, an Alternative formula-Interface*

Description

An alternative aggregation function with a formula-interface, to avoid the cbind-operation in the function aggregate.formula.

Usage

```
aggregate2(data, by, ...)
```

Arguments

data	a data.frame
by	a two-sided formula
...	additional parameters of the function aggregate.data.frame, *except for* simplify

Details

The cbind-operation in the function aggregate.formula messes up with column(s) that are

factor and treat them as integer

Surv and treat them as matrix

The function aggregate.data.frame only accepts a list of factors for the parameter by.

Therefore, the function `aggregate2()` is created to take care of the factor and Surv columns of the input, with a formula-interface.

Value

The function `aggregate2()` returns a data.frame.

Note

The function aggregate.data.frame is the workhorse of the function aggregate.formula.

The function as.hyperframe.data.frame is **designed** to handle the list-columns returned by the function aggregate.

`as.vectorlist` *Convert R Object to* `vectorlist`

Description

Convert R Object to `vectorlist`

Usage

```
as.vectorlist(x, ...)
```

Arguments

`x`	a list
`...`	additional parameters of the function `is.vectorlist()`

Value

The function `as.vectorlist()` returns an R object of `S3` class `'vectorlist'`.

Examples

```
list(rnorm(6L), rnorm(6L)) |>
 as.vectorlist()
```

aug4gam *Augment Hypercolumn(s) for gam*

Description

Augment *all* numeric vector hypercolumns in a hyperframe for gam.

Usage

```
aug4gam(x, ...)

## S3 method for class 'data.frame'
aug4gam(x, ...)

## S3 method for class 'hyperframe'
aug4gam(x, ...)

## S3 method for class 'vectorlist'
aug4gam(x, ...)
```

Arguments

x	see **Usage**
...	additional parameters, currently of no use

Value

The S3 generic function `aug4gam()` returns a data.frame.

Author(s)

Tingting Zhan, Erjia Cui

is.vectorlist *Vector-List*

Description

To determine if an R object is a list of vectors with the same storage.mode, length and attributes.

Usage

```
is.vectorlist(
  x,
  mode = c("logical", "integer", "numeric", "double", "character")
)
```

Arguments

x	a listof
mode	character scalar other than 'any', 'complex' and 'raw', see the function is.vector

Value

The function `is.vectorlist()` returns a logical scalar.

Examples

```
spatstat.data::Kovesi$values |>
 is.vectorlist(mode = 'character') |>
 stopifnot()
spatstat.data::Kovesi$values |>
 is.vectorlist(mode = 'numeric')
```

---

pppBy *Hyper Data Frame with One-and-Only-One ppp-Hyper Column*

Description

To create a hyper data frame with one-and-only-one ppp-hyper column.

Usage

```
pppBy(
  marks,
  coords = ~x + y,
  by,
  data,
  window = owin(xrange = range(.x), yrange = range(.y)),
  ...
)
```

Arguments

marks	one-sided formula, e.g., ~ m1+m2, where m_i's are one or more marks
coords	one-sided formula, variable names of the x- and y-coordinates in data. Default value is ~x+y.
by	two-sided formula
data	data.frame
window	observation window owin, default value is the x- and y-span of coords in data.
...	additional parameters of the function ppp

Value

The function `pppBy()` returns a hyper data frame with one-and-only-one ppp-hyper column.

Index