

Package ‘groupedHyperframe’

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Type Package

Title Grouped Hyper Data Frame

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Description Extensions of “hyper data frame” (from package ‘spatstat.geom’) with a grouping structure. 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. Backward compatibility with user-code published in [doi:10.1093/bioinformatics/btaf430](https://doi.org/10.1093/bioinformatics/btaf430) is not maintained in versions $\geq 0.4.0$ (June 2026) of this package. The authors of those publications are the appropriate contacts for reproducibility inquiries.

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Contents

groupedHyperframe-package	2
aggregate.hyperframe	3
aggregate2	3

aug4gam	4
is.vectorlist	5
pppBy	6
Index	7

groupedHyperframe-package
<i>groupedHyperframe: Grouped Hyper Data Frame</i>

Description

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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 , <i>except for</i> 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](#).

 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	<i>Vector-List</i>
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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., $\sim m_1+m_2$, 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 $\sim x+y$.
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

aggregate, [3](#), [4](#)
aggregate.data.frame, [3](#), [4](#)
aggregate.formula, [3](#), [4](#)
aggregate.hyperframe, [3](#)
aggregate.hyperframe(), [3](#)
aggregate2, [3](#)
aggregate2(), [4](#)
as.hyperframe.data.frame, [4](#)
attributes, [5](#)
aug4gam, [4](#)
aug4gam(), [5](#)

cbind, [3](#), [4](#)
character, [5](#)

data.frame, [4–6](#)

factor, [4](#)
formula, [3](#), [4](#), [6](#)

gam, [4](#)
groupedHyperframe
 (groupedHyperframe-package), [2](#)
groupedHyperframe-package, [2](#)

hyperframe, [3](#), [4](#)

integer, [4](#)
is.vector, [5](#)
is.vectorlist, [5](#)
is.vectorlist(), [5](#)

length, [5](#)
list, [4](#), [5](#)
listof, [5](#)
logical, [5](#)

marks, [6](#)
matrix, [4](#)

numeric, [4](#)

owin, [6](#)

ppp, [6](#)
pppBy, [6](#)
pppBy(), [6](#)

storage.mode, [5](#)
Surv, [4](#)

vector, [4](#), [5](#)