Package 'vecvec'

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Title Construct Mixed Type Data Structures with Vectors of Vectors

Version 0.1.0

Description Mixed type vectors are useful for combining semantically similar classes. Some examples of semantically related classes include time across different granularities (e.g. daily, monthly, annual) and probability distributions (e.g. Normal, Uniform, Poisson). These groups of vector types typically share common statistical operations which vary in results with the attributes of each vector. The 'vecvec' data structure facilitates efficient storage and computation across multiple vectors within the same object.

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Imports rlang, vctrs

Suggests lifecycle, testthat (>= 3.0.0)

Config/testthat/edition 3

Encoding UTF-8

RoxygenNote 7.3.2.9000

NeedsCompilation no

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new_vecvec *Construct a vector of vectors*

Description

new_vecvec() constructs a new vector of vectors from a list of vectors. It is meant to be performant, and does not check the inputs for correctness in any way. It is only safe to use after a call to df_list(), which collects and validates the columns used to construct the data frame.

Usage

```
new_vecvec(x = list(), loc = NULL, class = character())
```

Arguments

x	An unnamed list of arbitrary vectors.
loc	A named list of value locations, with i identifying the vector index and x identifying the value index. By default, the order of appearance in x will be used.
class	Name of subclass.

Value

A vector of vectors of class vecvec.

Examples

```
# Create a vecvec prototype
new_vecvec()

# Construct a vecvec from a list of vectors
new_vecvec(list(letters, rnorm(10)))

# Fully specify a vecvec with locations
new_vecvec(
  x = list(letters, rnorm(10)),
  loc = list(
    i = c(rep(1L, 3), rep(2L, 5), rep(1L, 23), rep(2L, 5)),
    x = c(1:3, 1:5, 26:4, 6:10)
  )
)
```

unvecvec *Convert a vecvec object into its underlying vector type*

Description

[Experimental]

Usage

```
unvecvec(x, ..., ptype = NULL)
```

Arguments

x	A vecvec to unvecvec (convert to its underlying vector type)
...	These dots are for future extensions and must be empty.
ptype	If NULL, the default, the output type is determined by computing the common type across all elements of x. Alternatively, you can supply ptype to give the output a known type.

Value

A simple vector, all containing the same type of data.

vecvec *Create a new vector of vectors*

Description

Create a new vector of vectors

Usage

```
vecvec(...)
```

Arguments

...	Vectors to combine into a single vector without type coercion.

Value

A vector of vectors of class vecvec.

See Also

unvecvec() coerces the mixed-type vector into a single-typed regular vector. new_vecvec() is a performant alternative that accepts a list of vectors rather than ... (suitable for R packages).

Examples

```
vecvec(Sys.Date(), rnorm(3), letters)
```

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