Package ‘long2lstmarray’

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Title Longitudinal Dataframes into Arrays for Machine Learning Training

Version 0.2.0

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Imports abind, dplyr

License GPL (>= 3)

Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

URL https://github.com/luisgarcez11/long2lstmarray

BugReports https://github.com/luisgarcez11/long2lstmarray/issues

Suggests knitr, rmarkdown, testthat

Depends R (>= 2.10)

VignetteBuilder knitr

NeedsCompilation no

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Repository CRAN

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Description
An example dataset containing Amyotrophic Lateral Sclerosis Functional Rating Scale - Revised.

Usage
alsfrs_data

Format
A data frame with 100 rows and 15 variables:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>subjid</td>
<td>Subject ID</td>
</tr>
<tr>
<td>visdy</td>
<td>Visit day</td>
</tr>
<tr>
<td>p1</td>
<td>Scale items</td>
</tr>
<tr>
<td>p2</td>
<td>Scale items</td>
</tr>
<tr>
<td>p3</td>
<td>Scale items</td>
</tr>
<tr>
<td>p4</td>
<td>Scale items</td>
</tr>
<tr>
<td>p5</td>
<td>Scale items</td>
</tr>
<tr>
<td>p6</td>
<td>Scale items</td>
</tr>
<tr>
<td>p7</td>
<td>Scale items</td>
</tr>
<tr>
<td>p8</td>
<td>Scale items</td>
</tr>
<tr>
<td>p9</td>
<td>Scale items</td>
</tr>
<tr>
<td>p10</td>
<td>Scale items</td>
</tr>
<tr>
<td>x1r</td>
<td>Scale items</td>
</tr>
<tr>
<td>x2r</td>
<td>Scale items</td>
</tr>
<tr>
<td>x3r</td>
<td>Scale items</td>
</tr>
</tbody>
</table>

Source
get_var_array

Generate a matrix with various lags from a variable in the dataframe

Description

Generate a matrix with various lags from a variable in the dataframe

Usage

get_var_array(
  data,
  subj_var,
  var,
  time_var,
  lags,
  label_length = 1,
  label_output = FALSE
)

Arguments

data A data frame, data frame extension (e.g. a tibble).
subj_var A character string referring to the variable that specifies the "subject" variable.
var A character string referring to the variable that contains the variable values.
time_var A character string referring to the variable that contains the time variable values (e.g. visit day, minutes, years).
lags The length of each sliced sequence.
label_length How many values after are considered to be the label? Default to 1. If label_length = 1, the label value is always the value following the sliced sequence.
label_output logical. if TRUE a list including the matrix with the sliced sequences and a vector with the label is returned.

Value

If label_output is FALSE, a matrix with the sliced sequences is returned. If label_output is TRUE, a list with the matrix and vector with the labels from the same variable is returned.

Examples

get_var_array(alsfrs_data, "subjid", "p2", "visdy", lags = 3,
  label_output = FALSE)
### get_var_sequence

Get variable values from subject/variable name pair

**Description**

Get variable values from subject/variable name pair

**Usage**

```r
get_var_sequence(data, subj_var, subj, var)
```

**Arguments**

- `data`: A data frame, data frame extension (e.g. a tibble).
- `subj_var`: A character string referring to the variable that specifies the "subject" variable.
- `subj`: Any value that the "subject" variable can take.
- `var`: A character string referring to the variable that contains the variable values.

**Value**

A vector of values from variable `var` which `subj_var` equal to `subj`.

**Examples**

```r
get_var_sequence(sleep, subj_var = "ID", 1, "extra")
```

### longitudinal_array

Generate a matrix with various lags from a dataframe

**Description**

Generate a matrix with various lags from a dataframe

**Usage**

```r
longitudinal_array(
  data, 
  subj_var, 
  vars, 
  time_var, 
  lags, 
  label_length = 1, 
  label_var = NULL, 
  label_output = FALSE, 
  time_var_output = FALSE
)
```
slice_var_sequence

Generate a matrix with various lags from a sequence

Description

Generate a matrix with various lags from a sequence

Usage

slice_var_sequence(sequence, lags, label_length = 1, label_output = TRUE)
slice_var_sequence

Arguments

sequence  A vector representing the sequence to be sliced into many rows.
lags  The length of each sliced sequence.
label_length  How many values after are considered to be the label? Default to 1. If label_length = 1, the label value is always the value following the sliced sequence.
label_output  logical. if TRUE a list including the matrix with the sliced sequences and a vector with the labels is returned.

Value

If label_output is FALSE, a matrix with the sliced sequences is returned. If label_output is TRUE, a list with the matrix and vector with the labels is returned.

Examples

```
slice_var_sequence(sequence = 1:30,
  lags = 3, label_length = 1,
  label_output = TRUE)
```

```
slice_var_sequence(sequence = 1:30,
  lags = 3, label_length = 1,
  label_output = FALSE)
```

```
slice_var_sequence(sequence = 1:30,
  lags = 3, label_length = 2,
  label_output = FALSE)
```
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