Package ‘visae’

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Type Package
Title Visualization of Adverse Events
Version 0.2.0
Description Implementation of 'shiny' app to visualize adverse events based on the Common Terminology Criteria for Adverse Events (CTCAE) using stacked correspondence analysis as described in Diniz et. al (2021)<doi:10.1186/s12874-021-01368-w>.

BugReports https://github.com/dnzmarcio/visae/issues
License GPL (>= 2)
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Correspondence Analysis of Adverse Events

Usage

```r
ca_ae(
data, 
id, 
group, 
ae_class, 
label = "AE", 
contr_indicator = TRUE, 
mass_indicator = TRUE, 
contr_threshold = NULL, 
mass_threshold = NULL
)
```

Arguments

- **data**: data.frame or tibble object.
- **id**: unquoted expression indicating the variable name in data that corresponds to the id variable.
- **group**: unquoted expression indicating the variable name in data that corresponds to the group variable.
- **ae_class**: unquoted expression indicating the variable name in data that corresponds to AE class.
- **label**: character value indicating the column name of AE class in resulting tables.
- **contr_indicator**: logical value indicating the use of color intensity to represent the maximum contribution of each ae_class.
- **mass_indicator**: logical value indicating the use of dot size to represent the overall relative frequency of each ae_class.
- **contr_threshold**: numerical value between 0 and 1 filtering ae_class with contribution greater than contr_threshold.
- **mass_threshold**: numerical value between 0 and 1 filtering ae_class with mass greater than mass_threshold.
Value

- a list of
  - `tab_abs`: a tibble showing absolute frequency of `ae_class` by group;
  - `tab_rel`: a tibble showing percent of `ae_class` by group;
  - `total_inertia`: a numerical value indicating the total inertia;
  - `tab_inertia`: a tibble showing inertia broken down by dimension and the percent relative to the total inertia;
  - `asymmetric_plot`: a contribution biplot.

References


Examples

```r
library(magrittr)
library(dplyr)

id <- rep(1:50, each = 2)
group <- c(rep("A", 50), rep("B", 50))
ae_grade <- sample(1:5, size = 100, replace = TRUE)
ae_domain <- sample(c("D", "E"), size = 100, replace = TRUE)
ae_term <- sample(c("F", "G", "H", "I"), size = 100, replace = TRUE)
df <- tibble(id = id, trt = group,
             ae_g = ae_grade, ae_d = ae_domain, ae_t = ae_term)
test <- df %>% ca_ae(., id = id, group = trt, ae = ae_g, label = "AE",
                   contr_indicator = TRUE, mass_indicator = TRUE,
                   contr_threshold = 0.01, mass_threshold = 0.01)
```

Description

Shiny App for Correspondence Analysis of Adverse Events

Usage

```r
run_ca(
    data,
    id,
    group,
    ae_grade = NULL,
)```
Arguments  

- **data**: data.frame or tibble object.
- **id**: unquoted expression indicating the variable name in `data` that corresponds to the `id` variable.
- **group**: unquoted expression indicating the variable name in `data` that corresponds to the `group` variable.
- **ae_grade**: unquoted expression indicating the variable name in `data` that corresponds to AE grade class.
- **ae_domain**: unquoted expression indicating the variable name in `data` that corresponds to AE domain class.
- **ae_term**: unquoted expression indicating the variable name in `data` that corresponds to AE term class.
- **ae_cycle**: unquoted expression indicating the variable name in `data` that corresponds to AE cycle.

Value  

an interactive web application to perform correspondence analysis for adverse event data.

Examples  

```r  
## Not run:  
library(magrittr)  
library(dplyr)  
patient_id <- 1:100  
group <- c(rep("A", 50), rep("B", 50))  
ae_grade <- sample(1:5, size = 100, replace = TRUE)  
ae_domain <- sample(c("C", "D"), size = 100, replace = TRUE)  
ae_term <- sample(c("E", "F", "G", "H"), size = 100, replace = TRUE)  
dt <- tibble(patient_id = patient_id, trt = group,  
             ae_g = ae_grade, ae_d = ae_domain, ae_t = ae_term)  
dt %>% run_ca(., group = trt,  
              id = patient_id,  
              ae_grade = ae_g,  
              ae_domain = ae_d,  
              ae_term = ae_t)  
## End(Not run)  ```
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