Package 'perccalc'

August 24, 2018

Title Estimate Percentiles from an Ordered Categorical Variable

Version 1.0.3

Description An implementation of two functions that estimate values for percentiles from an ordered categorical variable as described by Reardon (2011, isbn:978-0-87154-372-1). One function estimates percentile differences from two percentiles while the other returns the values for every percentile from 1 to 100.

Depends R (>= 3.4.0)

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Language en-US

Encoding UTF-8

LazyData true

RoxygenNote 6.0.1

Imports magrittr, dplyr, purrr, stats, tibble, broom, tidyr, multcomp

Suggests spelling, knitr, rmarkdown, testthat, ggplot2, MASS, carData

VignetteBuilder knitr

NeedsCompilation no

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R topics documented:

perc_diff *Calculate percentile differences from an ordered categorical variable and a continuous variable.*

Description

Calculate percentile differences from an ordered categorical variable and a continuous variable.

Usage

```
perc_diff(data_model, categorical_var, continuous_var, weights = NULL,
  percentiles = c(90, 10))
```

Arguments

data_model	A data frame with at least the categorical and continuous variables from which to estimate the percentile differences
categorical_var	The bare unquoted name of the categorical variable. This variable SHOULD be an ordered factor. If not, the function will stop.
continuous_var	The bare unquoted name of the continuous variable from which to estimate the percentiles
weights	The bare unquoted name of the optional weight variable. If not specified, then estimation is done without weights
percentiles	A numeric vector of two numbers specifying which percentiles to subtract

Value

A vector with the percentile difference and it's associated standard error

Examples

```
library(dplyr)

set.seed(23131)
N <- 1000
K <- 20

toy_data <- tibble::tibble(id = 1:N,
score = rnorm(N, sd = 2),
type = rep(paste0("inc", 1:20), each = N/K),
wt = 1)

# perc_diff(toy_data, type, score)
# type is not an ordered factor!

toy_data <-
```

```
toy_data %>%
mutate(type = factor(type, levels = unique(type), ordered = TRUE))


perc_diff(toy_data, type, score, percentiles = c(90, 10))
perc_diff(toy_data, type, score, percentiles = c(50, 10))

perc_diff(toy_data, type, score, weights = wt, percentiles = c(30, 10))
```

`perc_dist` *Calculate a distribution of percentiles from an ordered categorical variable and a continuous variable.*

Description

Calculate a distribution of percentiles from an ordered categorical variable and a continuous variable.

Usage

```
perc_dist(data_model, categorical_var, continuous_var, weights = NULL)
```

Arguments

`data_model`	A data frame with at least the categorical and continuous variables from which to estimate the percentiles
`categorical_var`	The bare unquoted name of the categorical variable. This variable SHOULD be an ordered factor. If not, the function will stop.
`continuous_var`	The bare unquoted name of the continuous variable from which to estimate the percentiles
`weights`	The bare unquoted name of the optional weight variable. If not specified, then estimation is done without weights

Value

A data frame with the scores and standard errors for each percentile

Examples

```
library(dplyr)

set.seed(23131)
N <- 1000
K <- 20
```

```
toy_data <- tibble::tibble(id = 1:N,
score = rnorm(N, sd = 2),
type = rep(paste0("inc", 1:20), each = N/K),
wt = 1)

# perc_dist(toy_data, type, score)
# type is not an ordered factor!

toy_data <-
 toy_data %>%
 mutate(type = factor(type, levels = unique(type), ordered = TRUE))


perc_dist(toy_data, type, score)
```

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