Package ‘pomcheckr’

October 14, 2022

Title  Graphical Check for Proportional Odds Assumption
Version  0.1.1
Description  Implements the method described at the UCLA Statistical
Consulting site <https://stats.idre.ucla.edu/r/dae/ordinal-logistic-regression/>
for checking if the proportional odds assumption holds for a
cumulative logit model.
License  MIT + file LICENSE
Encoding  UTF-8
LazyData  true
RoxygenNote  7.1.1
Suggests  testthat (>= 3.0.0), knitr, rmarkdown
Config/testthat/edition  3
Imports  dplyr, tidyr (>= 1.0.0), ggplot2, assertthat, stats, rlang,
magrittr, stringr
Depends  R (>= 2.10)
VignetteBuilder  knitr
NeedsCompilation  no
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Description


Usage

nhanes

Format

A data frame with 9756 rows and 16 variables:

- seqn  Respondent sequence number
- ridageyr  Age in years at screening
- riagendr  Gender
- dmdmartl  Marital status
- dmdeduc2  Education level - Adults 20+
- sdmvpsu  Masked variance pseudo-PSU
- sdmvstra  Masked variance pseudo-stratum
- wtint2yr  Full sample 2 year interview weight
- female  Gender
- hsq496  How many days feel anxious
- hsq571  SP donated blood in the past 12 months
- hsd010  General health condition
- pad630  Minutes moderate-intensity work
- pad675  Minutes moderate recreational activities
- paq665  Moderate recreational activities
- pad680  Minutes sedentary activity

Source

ologit

Simulated data for ordinal logistic regression example.

Description

A dataset used in the UCLA Statistical Consulting Ordinal Logistic Regression Example [https://stats.idre.ucla.edu/r/dae/ordinal-logistic-regression/](https://stats.idre.ucla.edu/r/dae/ordinal-logistic-regression/)

Usage

ologit

Format

A data frame with 400 rows and 4 variables:

- **apply** Likelihood of applying to graduate school
- **pared** Indicator for whether at least 1 parent has a graduate degree
- **public** Indicator for whether undergraduate institution is public or private
- **gpa** Student’s grade point average

Source

[https://stats.idre.ucla.edu/stat/data/ologit.dta](https://stats.idre.ucla.edu/stat/data/ologit.dta)

plot.pomcheck

Graphical check for proportional odds assumption

Description

Generates the plots described in [https://stats.idre.ucla.edu/r/dae/ordinal-logistic-regression/](https://stats.idre.ucla.edu/r/dae/ordinal-logistic-regression/) for checking if the proportional odds assumption holds for a cumulative logit model.

Usage

```r
### S3 method for class 'pomcheck'
plot(x, legend.position = "none", ...)
```

Arguments

- `x` a pomcheck object
- `legend.position` the position of legends ("none", "left", "right", "bottom", "top", or two-element numeric vector)
- `...` currently unused
Value
None

See Also
pomcheck

Examples
plot(pomcheck(Species ~ Sepal.Width, iris))

pomcheck  
Graphical check for proportional odds assumption

Description
Implements the method described in https://stats.idre.ucla.edu/r/dae/ordinal-logistic-regression/ for checking if the proportional odds assumption holds for a cumulative logit model.

Usage
pomcheck(object, ...)

## Default S3 method:
pomcheck(object, x, data, ...)

## S3 method for class 'formula'
pomcheck(formula, data, ...)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>object</td>
<td>character string for response</td>
</tr>
<tr>
<td>...</td>
<td>currently unused</td>
</tr>
<tr>
<td>x</td>
<td>vector of character string(s) for explanatory variable(s)</td>
</tr>
<tr>
<td>data</td>
<td>data frame containing the variables</td>
</tr>
<tr>
<td>formula</td>
<td>formula of the form y ~ x1 + x2 + ...</td>
</tr>
</tbody>
</table>

Value
an object of class 'pomcheck'

Methods (by class)
- default: default
- formula: supports formula specification
pomcheck

See Also

plot.pomcheck

Examples

pomcheck(Species ~ Sepal.Length, iris)
pomcheck(Species ~ Sepal.Length + Sepal.Width, iris)
pomcheck(object="Species", x="Sepal.Length", iris)
pomcheck(object="Species", x=c("Sepal.Length", "Sepal.Width"), iris)
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