Package 'ridgregextra'

May 9, 2026

Type Package

Title Ridge Regression Parameter Estimation

Version 0.1.1

Description

It is a package that provides alternative approach for finding optimum parameters of ridge regression. This package focuses on finding the ridge parameter value k which makes the variance inflation factors closest to 1, while keeping them above 1 as addressed by Michael Kutner, Christopher Nachtsheim, John Neter, William Li (2004, ISBN:978-0073108742). Moreover, the package offers end-to-end functionality to find optimum k value and presents the detailed ridge regression results. Finally it shows three sets of graphs consisting k versus variance inflation factors, regression coefficients and standard errors of them.

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Encoding UTF-8

URL https://github.com/filizkrdg/ridgregextra

BugReports https://github.com/filizkrdg/ridgregextra/issues

Depends R (>= 4.0.0), plotly (>= 4.9.0), isdals (>= 3.0.0), mctest (>= 1.3.0), stats(>= 4.0.0), graphics(>= 4.0.0)

RoxygenNote 7.1.1

NeedsCompilation no

Author Filiz Karadag [aut] (ORCID: <https://orcid.org/0000-0002-0116-7772>), Hakan Savas Sazak [aut] (ORCID: <https://orcid.org/0000-0001-6123-1214>), Olgun Aydin [cre] (ORCID: <https://orcid.org/0000-0002-7090-0931>)

Maintainer Olgun Aydin <olgun.aydin@pg.edu.pl>

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`ridgereg_k` *Ridge regression results with an automatically selected k value*

Description

Ridge regression with a selected k value

Usage

```
ridgereg_k(x, y, a, b)
```

Arguments

x	Explanatory variables (Dataframe, matrix)
y	Dependent variables (Dataframe, vector)
a	Lower bound of k
b	Upper bound of k

Value

A list of lists

Examples

```
library("mctest")
x <- Hald[,-1]
y <- Hald[,1]
ridgereg_k(x,y,a=0,b=1)

library(isdals)
data(bodyfat)
x <- bodyfat[,-1]
y <- bodyfat[,1]
ridgereg_k(x,y,a=0,b=1)
```

ridge_reg *Ridge regression results with a manually selected k value*

Description

Ridge regression with a manually selected k value

Usage

```
ridge_reg(x, y, k)
```

Arguments

x	Explanatory variables (Dataframe, matrix)
y	Dependent variables (Dataframe, vector)
k	Ridge parameter

Value

A list of lists

Examples

```
library("mctest")
x <- Hald[,-1]
y <- Hald[,1]
k <- 0.1
ridge_reg(x,y,k)

library(isdals)
data(bodyfat)
x <- bodyfat[,-1]
y <- bodyfat[,1]
k <- 0.1
ridge_reg(x,y,k)
```

vif_k *Ridge regression tables in the range of given lower and upper bounds of k values*

Description

Ridge regression tables in the range of given lower and upper bounds of k values

Usage

```
vif_k(x, y, a, b)
```

Arguments

x	Explanatory variables (Dataframe, matrix)
y	Dependent variables (Dataframe, vector)
a	Lower bound of k
b	Upper bound of k

Value

A list of lists

Examples

```
library("mctest")
x <- Hald[,-1]
y <- Hald[,1]
vif_k(x,y,a=0,b=1)

library(isdals)
data(bodyfat)
x <- bodyfat[,-1]
y <- bodyfat[,1]
vif_k(x,y,a=0,b=1)
```

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