

Package: **ridgregextra** (via r-universe)

August 21, 2024

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 ($\geq 4.0.0$), plotly ($\geq 4.9.0$), isdals ($\geq 3.0.0$), mctest ($\geq 1.3.0$), stats($\geq 4.0.0$), graphics($\geq 4.0.0$)

RoxygenNote 7.1.1

Repository <https://filizkrdg.r-universe.dev>

RemoteUrl <https://github.com/filizkrdg/ridgregextra>

RemoteRef HEAD

RemoteSha b57931ce0eea9566c6e87b5dda71abe6bfa16f24

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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

<code>x</code>	Explanatory variables (Dataframe, matrix)
<code>y</code>	Dependent variables (Dataframe, vector)
<code>a</code>	Lower bound of k
<code>b</code>	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	<i>Ridge regression results with a manually selected k value</i>
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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	<i>Ridge regression tables in the range of given lower and upper bounds of k values</i>
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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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