Package 'IBOSS'

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Title Information-Based Optimal Subdata Selection

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Description It implement the Information-Based Optimal Subdata Selection for Linear Regression.

Depends R (>= 3.3.1)

License GPL

Encoding UTF-8

LazyData true

RoxygenNote 5.0.1.9000

R topics documented:

`iboss.od` *The IBOSS method*

Description

This function implements the IBOSS method for the input covariate Z and response vector Y. It returns a list with elements: beta, the least squares estimate based on the subdata; se, the standard errors; sigma, variance estimate for the error term, index, index of the subdata.

Usage

```
iboss.od(Z, Y, k, int.adj = "TRUE")
```

Arguments

Z	the input covariate matrix or covariate vector
Y	the response vector
k	the subdata size
int.adj	whether to calculate the adjusted estimate of the intercept. It is TRUE by default.

Examples

```
library(IBOSS)
library(mvtnorm)
beta.true  <- rep(1, 51)
d <- length(beta.true) - 1
corr  <- 0.5
sigmax <- matrix(corr, d, d) + diag(1-corr, d)
n <- 5000
k <- 100
set.seed(0)
X  <- rmvt(n, sigmax, 2)
mu  <- beta.true[1] + c(X %*% beta.true[-1])
Y  <- mu + rnorm(n, 0, 3)
fit <- iboss.od(X, Y, k)
beta.od <- fit$beta
beta.odia <- fit$beta0.adj
```

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