Package 'ncpen'

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Type Package

Title Nonconvex penalty estimation

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Description Estimates nonconvex penalty. This project is funded by Julian Virtue Professorship at Graziadio School of Business and Management at Pepperdine University, US.

License GPL (>= 2)

LazyLoad yes

LazyData TRUE

Imports Rcpp (>= 0.12.12)

LinkingTo Rcpp, RcppArmadillo

RoxygenNote 6.0.1

R topics documented:

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ncpen-package *ncpen: A package for noncovex penalized estimations.*

Description

ncpen fits generalized linear models by using penalized maximum likelihood estimation. It covers Various non-convex penalties such as SCAD and MCP for linear, logistic and poisson regression models.

Arguments

`y.vec`	numeric vector; samples of dependent variable
`x.mat`	numeric matrix; samples of independent variables
`family`	character; model type; defalut is "gaussian"

Details

The ncpen package provides .... and many

Value

This returns..... If integer overflow http://en.wikipedia.org/wiki/Integer_overflow occurs, the output will be NA with a warning. Otherwise it will be a length-one numeric or complex vector.

Zero-length vectors have sum 0 by definition. See http://en.wikipedia.org/wiki/Empty_sum for more details.

ncpen functions

The ncpen functions ...

Note

Leave some notes here.

Author(s)

Sunghoon Kwon, Dongshin Kim

References

Paper 1 by Big Name

See Also

See this also....

Examples

```
fam = "lin"
pen = "scad"

a = 3 + 4;
a
```

cv.ncpen *non-convex penalized estimation for generalized linear models*

Description

ncpen fits generalized linear models by using penalized maximum likelihood estimation. It covers Various non-convex penalties such as SCAD and MCP for linear, logistic and poisson regression models.

Usage

```
cv.ncpen(y.vec, x.mat, family = "gaussian", penalty = "scad", n.fold = 10,
  lambda = NULL, n.lambda = 100, r.lambda = 0.001, w.lambda = NULL,
  tau = 5, gam = 1e-06, ridge = 1e-06, df.max = 50, proj.min = 100,
  iter.max = 1000, b.eps = 1e-06, k.eps = 1e-04, x.standardize = TRUE,
  intercept = TRUE)
```

Arguments

y.vec	numeric vector; samples of dependent variable
x.mat	numeric matrix; samples of independent variables
family	character; model type; gaussian for linear, binomial for logistic, and poisson for includes ; defalut is "gaussian"
penalty	character;

Value

This returns..... If integer overflow http://en.wikipedia.org/wiki/Integer_overflow occurs, the output will be NA with a warning. Otherwise it will be a length-one numeric or complex vector.

Zero-length vectors have sum 0 by definition. See http://en.wikipedia.org/wiki/Empty_sum for more details.

Note

Leave some notes here.

Author(s)

Sunghoon Kwon, Dongshin Kim

References

Paper 1 by Big Name

See Also

See this also....

Examples

```
fam = "lin"
pen = "scad"

a = 3 + 4;
a

## Not run:
```

---

ncpen *non-convex penalized estimation for generalized linear models*

Description

ncpen fits generalized linear models by using penalized maximum likelihood estimation. It covers Various non-convex penalties such as SCAD and MCP for linear, logistic and poisson regression models.

Usage

```
ncpen(y.vec, x.mat, family = c("gaussian", "binomial", "poisson"),
  penalty = c("scad", "mcp", "lasso", "classo", "sridge", "mbridge", "mlog"),
  lambda = NULL, n.lambda = 100, r.lambda = 0.001, w.lambda = NULL,
  tau = 5, gam = 1e-06, ridge = 1e-06, df.max = 50, proj.min = 100,
  iter.max = 1000, b.eps = 1e-06, k.eps = 1e-04, x.standardize = TRUE,
  intercept = TRUE)
```

Arguments

y.vec	numeric vector; samples of dependent variable
x.mat	numeric matrix; samples of independent variables
family	character; model type; defalut is "gaussian"

Value

This returns..... If integer overflow http://en.wikipedia.org/wiki/Integer_overflow occurs, the output will be NA with a warning. Otherwise it will be a length-one numeric or complex vector.

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Leave some notes here.

Author(s)

Sunghoon Kwon, Dongshin Kim

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See Also

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Examples

```
fam = "lin"
pen = "scad"

a = 3 + 4;
a

## Not run:
```

`plot.ncpen` *plot.ncpen*

Description

ncpen fits generalized linear models by using penalized maximum likelihood estimation. It covers Various non-convex penalties such as SCAD and MCP for linear, logistic and poisson regression models.

Usage

```
## S3 method for class 'ncpen'
plot(ncpen.fit, log.scale = FALSE, ...)
```

Arguments

`y.vec`	numeric vector; samples of dependent variable
`x.mat`	numeric matrix; samples of independent variables
`family`	character; model type; `gaussian` for linear, `binomial` for logistic, and `poisson` for includes ; defalut is "gaussian"
`penalty`	character;

Value

This returns..... If integer overflow http://en.wikipedia.org/wiki/Integer_overflow occurs, the output will be NA with a warning. Otherwise it will be a length-one numeric or complex vector.

Zero-length vectors have sum 0 by definition. See http://en.wikipedia.org/wiki/Empty_sum for more details.

Note

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Examples

```
fam = "lin"
pen = "scad"

a = 3 + 4;
a

## Not run:
```

Index