

Package: longRPart2 (via r-universe)

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Type Package

Title Recursive Partitioning of Longitudinal Data

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Depends R (>= 2.10), nlme, ggplot2, rpart, formula.tools, MASS

Suggests mgev, rpart.plot

Description Performs recursive partitioning of linear and nonlinear mixed effects models, specifically for longitudinal data. The package is an extension of the original 'longRPart' package by Stewart and Abdoell (2013)

<<https://cran.r-project.org/package=longRPart>>.

License GPL

RoxygenNote 7.2.1

LazyData true

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

RemoteUrl <https://github.com/rjacobucci/longrpart2>

RemoteRef HEAD

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| | |
|-----------|--|
| ex.data.3 | <i>A dataset used as an example for longRPart2</i> |
|-----------|--|

Description

A dataset used as an example for longRPart2

Usage

ex.data.3

Format

A data frame with 600 rows and 4 variables:

id id number

z covariate

time time variable

y outcome ...

| | |
|------------|--------------------------------------|
| lcart.mod1 | <i>Longitudinal data with groups</i> |
|------------|--------------------------------------|

Description

A saved image with rp object

Usage

lcart.mod1

Format

An object of class "lrp"

| | |
|------------|---|
| longRPart2 | <i>Trying to suppress notes from lrp2Plot</i> |
|------------|---|

Description

Trying to suppress notes from lrp2Plot

Description

Longitudinal Recursive Partitioning

Usage

```
lrp(
  method,
  nlme.model = NULL,
  randomFormula,
  fixedFormula = NULL,
  data,
  start,
  group,
  rPartFormula,
  weight = NULL,
  use_parallel = FALSE,
  R = NULL,
  min.dev = NULL,
  control = rpart.control()
)
```

Arguments

| | |
|---------------|---|
| method | Whether to use lme() or nlme(). Use either method="lme" or method="nlme". This changes what additional arguments need to be passed. |
| nlme.model | Necessary to specify if method="nlme" |
| randomFormula | Random effects to include for nlme() or lme() |
| fixedFormula | Fixed effects to include for nlme() or lme() |
| data | Dataset |
| start | Starting values for nlme() |
| group | Grouping for nlme() |
| rPartFormula | Not sure yet |
| weight | Sample weights to be passed to rpart |
| use_parallel | Whether to parallelize the split models |
| R | Correlation matrix to use for nlme. this is correlation= |
| min.dev | The minimum decrease in deviance to choose a split. Note that this overrides the default cp criterion in rpart.control() |
| control | Control function to be passed to rpart() |

Examples

```

library(longRPart2)

data(ex.data.3)
model.0 = nlme(y~b0i+b1i*time,
              data=ex.data.3,
              fixed=b0i+b1i~1,
              random=b0i+b1i~1,
              group=~id,
              start=c(10,5))

lcart.mod1 <- lrp(method="nlme",
                 nlme.model=y~b0i+b1i*time,
                 fixedFormula=b0i+b1i~1,
                 rPartFormula = ~ z,
                 group= ~ id,
                 randomFormula=b0i+b1i~1,
                 data=ex.data.3,
                 start=c(10,5))

data(lcart.mod1)
summary(lcart.mod1)
plot(lcart.mod1)
# for smooth_method, "loess" is recommend but "gam" faster
lrp2Plot(lcart.mod1,smooth_method="gam")

```

lrp2Plot

Longitudinal Recursive Partitioning Plotting Function

Description

Longitudinal Recursive Partitioning Plotting Function

Usage

```
lrp2Plot(model, smooth_method = "loess")
```

Arguments

| | |
|---------------|--|
| model | A longrpart2 model. |
| smooth_method | Whether to use generalized additive models, smooth_method="gam", or loess, smooth_method="loess". Defaults to loess. |

Examples

```
library(longRPart2)
```

| | |
|---------|-----------------------------------|
| lrpPlot | <i>Plot Expected Trajectories</i> |
|---------|-----------------------------------|

Description

Plot Expected Trajectories

Usage

```
lrpPlot(model, smoothing = "n", color = NULL, place = "bottomright")
```

Arguments

| | |
|-----------|------------------------------------|
| model | Model object from longRPart2() |
| smoothing | Type of smoothing for trajectories |
| color | Color to use |
| place | Where to place the plot |

| | |
|----------|-------------------------------------|
| plot.lrp | <i>Plot function for longRPart2</i> |
|----------|-------------------------------------|

Description

Plot function for longRPart2

Usage

```
## S3 method for class 'lrp'  
plot(x, box.palette = "auto", ...)
```

Arguments

| | |
|-------------|-----------------------------|
| x | A model from lrp. |
| box.palette | Color scheme for rpart.plot |
| ... | Other arguments. |

`summary.lrp`*Summary results from lrp.*

Description

Summary results from lrp.

Usage

```
## S3 method for class 'lrp'  
summary(object, ...)
```

Arguments

| | |
|---------------------|---------------------|
| <code>object</code> | An object from lrp. |
| <code>...</code> | Other arguments. |

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