

Package ‘longRPart2’

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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 mgcv, 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 Abdolell (2013) <<https://cran.r-project.org/package=longRPart>>.

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RoxygenNote 6.0.1

LazyData true

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

Trying to suppress notes from lrp2Plot

lrp *Longitudinal Recursive Partitioning*

Description

Longitudinal Recursive Partitioning

Usage

```
lrp(method, nlme.model = NULL, randomFormula, fixedFormula = NULL, data,
     start, group, rPartFormula, weight = NULL, 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
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)
#Irp2Plot(lcart.mod1)

```

Irp2Plot

Longitudinal Recursive Partitioning Plotting Function

Description

Longitudinal Recursive Partitioning Plotting Function

Usage

```
Irp2Plot(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)
```

IrpPlot

Plot Expected Trajectories

Description

Plot Expected Trajectories

Usage

```
IrpPlot(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>
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Description

Plot function for longRPart2

Usage

```
## S3 method for class 'lrp'
plot(x, ...)
```

Arguments

x	A model from lrp.
...	Other arguments.

summary.lrp	<i>Summary results from lrp.</i>
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Description

Summary results from lrp.

Usage

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

Arguments

object	An object from lrp.
...	Other arguments.

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