

# Package ‘longRPart2’

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**Type** Package

**Title** Recursive Partitioning of Longitudinal Data

**Version** 0.2.3

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

**License** GPL

**RoxygenNote** 6.0.1

**LazyData** true

**NeedsCompilation** no

**Repository** CRAN

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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 ...

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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"

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longRPart2	<i>Trying to suppress notes from lrp2Plot</i>
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**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, 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)

```

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Irp2Plot

*Longitudinal Recursive Partitioning Plotting Function*


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### 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)
```

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IrpPlot

*Plot Expected Trajectories*


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### 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

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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.

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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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