Package 'strip'

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Type Package

Title Lighten your R Model Outputs

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Description The strip function deletes components of R model outputs that are useless for specific purposes, such as predict[ing], print[ing], summary[izing], etc.

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LazyData TRUE

Depends R (>= 3.1.3)

Imports rlist

Suggests caret, datasets, e1071, knitr, randomForest, stats, testthat, utils

URL https://github.com/paulponcet/strip

BugReports https://github.com/paulponcet/strip/issues

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R topics documented:

strip *Lighten R model outputs*

Description

The strip function deletes components of R model outputs that are useless for specific purposes, such as predict[ing], print[ing], summary[izing], etc.

The idea is to prevent the size of the model output to grow with the size of the training dataset. This is useful if one has to save the output for later use while limiting its size on disk.

The birth of this package originates with Nina Zumel's post 'Trimming the Fat from glm() Models in R' on Win-Vector Blog.

Usage

```
strip(object, keep, ...)

## Default S3 method:
strip(object, keep, ...)

## S3 method for class 'gam'
strip(object, keep, ...)

## S3 method for class 'glm'
strip(object, keep, ...)

## S3 method for class 'lm'
strip(object, keep, ...)

## S3 method for class 'loess'
strip(object, keep, ...)

## S3 method for class 'randomForest'
strip(object, keep, ...)

## S3 method for class 'train'
strip(object, keep, use_trim = FALSE, ...)
```

Arguments

object	result of an R model, see 'Details'.
keep	character. A vector of values among "everything", "predict", "print", and "summary". Except for strip.lm, currently only the values "everything", "predict", and "print", are implemented.
...	Additional arguments to be passed to other methods.
use_trim	boolean. For the strip.train method, if use_trim=TRUE and if keep="predict", then the function applied is (if it exists) the trim function embedded as object$modelInfo$trim.

Details

If `keep="predict"`, components inside the list `object` are kept if they are needed by the `predict` method, otherwise they are set to `NULL`. If `keep=c("predict", "print")`, components are kept as soon as they are needed by one of the `predict` or `print` methods. If `keep="everything"`, `object` is returned with no modifications.

Currently the models supported are limited to the following list:

- `lm` and `glm`, the linear and generalized linear regression function from package **stat**;
- `loess`, the local polynomial regression function from package **stat**;
- `randomForest`, from package **randomForest**.

There is also a `strip` function for 'train' objects built with the **caret** package.

Further developments of the package should include additional models, and should enable additional `keep` values (e.g. `keep="summary"`, `keep="anova"`, etc.)

Value

A list of the same class as `object` is returned.

Author(s)

The method for `glm` objects is adapted from Nina Zumel's post on Win-Vector Blog.

The method for `randomForest` objects is adapted from ReKa's answer on StackExchange.

See Also

See Nina Zumel's post on Win-Vector Blog for further insight, examples, and motivations; ReKa's answer on StackExchange for reducing the size of a `randomForest` object; this discussion for limiting the 'footprint' of regression and classification objects within the **caret** package.

Examples

```
data("mtcars")
set.seed(110)
i = sample(2, nrow(mtcars), replace = TRUE, prob=c(0.8, 0.2))
r1 = lm(mpg ~ ., data = mtcars[i==1,])
r2 = strip(r1, keep = "predict")

# Estimate the objects' size as the size of their serialization
length(serialize(r1, NULL))
length(serialize(r2, NULL))

# Check that predictions are the same
p1 = predict(r1, newdata = mtcars[i==2,])
p2 = predict(r2, newdata = mtcars[i==2,])
identical(p1, p2) # TRUE
```

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