Package 'rde'

July 23, 2025

Title Reproducible Data Embedding

Version 0.1.0

Description Allows caching of raw data directly in R code. This allows R
scripts and R Notebooks to be shared and re-run on a machine without access
to the original data. Cached data is encoded into an ASCII string that can
be pasted into R code. When the code is run, the data is automatically
loaded from the cached version if the original data file is unavailable.
Works best for small datasets (a few hundred observations).

Depends R (>= 3.1)

Imports clipr

License GPL-3

Encoding UTF-8

LazyData true

Suggests testthat, knitr, lintr, rmarkdown, spelling

VignetteBuilder knitr

RoxygenNote 6.0.1

Language en-US

SystemRequirements xclip (https://github.com/astrand/xclip) or xsel
(http://www.vergenet.net/~conrad/software/xsel/) for accessing
the X11 clipboard

URL https://github.com/kloppen/rde

BugReports https://github.com/kloppen/rde/issues

NeedsCompilation no

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Repository CRAN

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copy_rde_var   *Encode, compress and copy data into the clipboard*

Description

copy_rde_var is intended to work with load_rde_var. The normal workflow would use copy_rde_var to copy a variable to the clipboard and then paste it in to the third argument of load_rde_var.

Usage

```
copy_rde_var(var, line.width = 80L, no.clipboard = FALSE)
```

Arguments

var	the variable to copy
line.width	the desired width of lines of text (-1 for no line breaks)
no.clipboard	the default is FALSE. Indicates that you want the function to return the string that would have been copied to the clipboard without actually copying to the clipboard. This option is mainly used for testing purposes. Normal users will not use it.

Details

The variable in the argument var is first saved using saveRDS. Then the saved variable is compressed using bzip2 compression. Next, the compressed data is base 64 encoded into a character string. Next, that string is prepended with a code that indicates the version of this package. The prepended code (currently 'rde1' allows for future changes while providing backwards compatibility). Finally, the string is optionally broken up into lines of width line.width. Whitespace and line breaks are ignored by load_rde_var.

On X11 systems (e.g. Linux), external software is required in order to access the clipboard. Either 'xsel' or 'xclip' is required. Installation of this software will depend on the installation that you use, but on Ubuntu/Debian, 'sudo apt-get install xsel' will probably work.

On Windows and OSX, no additional software is required.

Value

None (or string if no.clipboard=TRUE)

Examples

```
copy_rde_var(iris)
```

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load_rde_var	*Load data in a reproducible way that allows for exchange of code*

Description

`load_rde_var` attempts to execute the code in `load.fcn`. If that succeeds, then the return value of that code is returned by `load_rde_var`. Otherwise, the value stored in `cache` is returned. `cache` must contain an encoded copy of the value produced by the function `copy_rde_var`. Optionally, you can force the use of the cached data by setting `use.cache = TRUE`.

Usage

```
load_rde_var(use.cache = FALSE, load.fcn, cache)
```

Arguments

`use.cache`	boolean to force the use of cached data
`load.fcn`	code to load the data from its original source
`cache`	a cached copy of the data

Details

This package is intended for small datasets. A copy of the data is encoded as a string (using base64 encoding, after compressing the data) and that string is copied into your code. Even though the data is compressed, the encoded string can still be quite long. If your data is more than a few hundred observations, this package probably isn't for you.

`load.fcn` must contain executable R code. Unless that code is a single expression, normally it would be enclosed in a pair of braces.

`cache` must be a string that was originally produced by `copy_rde_var`. See the documentation for that function for more details about the format of this string.

If the code in `load.fcn` fails, then a message is produced to indicate that the failure and the data encoded in `cache` is returned instead. This would occur if you share you code with someone who does not have access to the data that you're loading in your code.

If `use.cache = TRUE`, the code in `load.fcn` is ignored and the data is loaded from the encoded string `cache`. This can be useful if it takes a very long time obtain the data and you re-run your code often.

If the value produced by the code in `load.fcn` does not match the value encoded in `cache`, then a warning is produced to indicate that there is a mismatch.

Value

The data, either loaded using load.fcn, if possible, or from cache if that fails.

See Also

copy_rde_var

Examples

```
load_rde_var(use.cache = FALSE, {
    head(iris, 3)
}, "
rde1QlpoOTFBWSZTWbGO254AAKT/5P//XAAAAQAAwARIwC/n3YBAAAAwACYFAbAA7IhKIm
lPaU3oaRqekyaDTQNPJP1MhDAaA0AAGmg0A0AaBIokNGgAAAAAANMYUzuJyxRYUJWNnsC1
tgiccpLFvZTHhARK1KFQ1z25bNBCC+0pWKgEnGEzpxVaihSiTBL2j6RRFchjamGBFpBMwN
bAHwgEGosCEGYBoztHPFUVjGcDz3qu9p4cb8rVyVfHmR5S3bWXfDDnTnyJDJh0iMIpionY
lfq1FwK/IvzsuBsOmuZNGtpp7oWrW4upNNGDiL2E9T6iY2RFqabO9/r9oiN6p/YIdV1FPP
ISLqVP4u5IpwoSFjHbc8A=
")
```

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