Package: automagic (via r-universe)

September 16, 2024

Type Package

Title Automagically Document and Install Packages Necessary to Run R Code

Version 0.5.1

Description Parse R code in a given directory for R packages and attempt to install them from CRAN or GitHub. Optionally use a dependencies file for tighter control over which package versions to install.

License GPL

Encoding UTF-8

LazyData true

RoxygenNote 6.1.1

Depends R (>= 3.1.0)

Imports dplyr, formatR, knitr, magrittr, purrr, remotes, yaml

URL https://github.com/cole-brokamp/automagic

BugReports https://github.com/cole-brokamp/automagic/issues

Suggests testthat

Repository https://cole-brokamp.r-universe.dev

RemoteUrl https://github.com/cole-brokamp/automagic

RemoteRef HEAD

RemoteSha 4d703b5cb65787f046f9ce4e897f40d42a68a72a

Contents

`automagic` *Automagically install all required R packages*

Description

Searches a given directory for all R and R Markdown files, parses them for required packages and attempts to install them from CRAN. More importantly, if a 'deps.yaml' file was made using `make_deps_file`, automagic will use this rather than try to install based on a best guess.

Usage

```
automagic(directory = getwd())
```

Arguments

`directory`	folder to search for R and Rmd files

See Also

`install_package_guess`, `parse_packages`

`get_dependent_packages`
get packages required to run R code

Description

get packages required to run R code

Usage

```
get_dependent_packages(directory = getwd())
```

Arguments

`directory`	folder to search for R and Rmd files

Details

parses all R and Rmd files in a directory and uses `parse_packages` to find all R packages required for the code to run

Value

a vector of package names

get_package_details *get package details*

Description

Uses packageDescription to get details about given package from R library on local machine. Currently only supports CRAN and GitHub packages

Usage

```
get_package_details(pkg_name)
```

Arguments

pkg_name	package name

Value

A list of package characteristics. "Package", "Repository", and "Version" for CRAN packages. "Package", "GithubUsername", "GithubRepo", "GithubRef", and "GithubSHA1" for Github packages.

install_deps_file *Install R packages from a package dependencies (*deps.yaml*) file*

Description

Installs packages from GitHub and CRAN based on Sha1 key and version number respectively, as defined in a deps.yaml file created by make_deps_file

Usage

```
install_deps_file(directory = getwd())
```

Arguments

directory	directory containing deps.yaml file

See Also

make_deps_file, automagic

install_package_guess *Install latest version of package from CRAN*

Description

If a package is not available in the R library, attempt to install it from CRAN. Unlike previous versions of automagic, if the packages is not available on CRAN, the function will return an error (instead of trying to install from GitHub). If R is running interactively, then the user will be prompted before installing.

Usage

```
install_package_guess(pkg, force_install = FALSE,
  prompt = interactive())
```

Arguments

pkg	a character vector with the names of packages to install from CRAN
force_install	install even if package is in library (warning! this could install a newer or older version of an already installed package)
prompt	prompt the user to install a package (defaults to yes if the R session is interactive)

Details

@details This function does not check package versions. Specify `force_install=TRUE` to force installation of the package, updating it to the latest available version. Note that this function attempts to install its packages based on a best guess and is meant for use in automatically setting up an R programming environment. Do not use for installing packages if you have the option to install from a `deps.yaml` file. See `make_deps_file` and `install_deps_file` for installing version specific packages based on a local R library.

make_deps_file *Make a package dependencies (*`deps.yaml`*) file*

Description

This function parses R code for required packages using `parse_packages` and then queries the R package library to determine the exact source and version of each package to install. Currently, only CRAN and GitHub packages are supported. Install packages from the 'deps.yaml' file using `automagic{install_deps_file}`

Usage

```
make_deps_file(directory = getwd())
```

Arguments

directory	directory containing R code to parse

See Also

automagic

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parse_packages *Parse R code for required packages*

Description

Parses an R or R Markdown file for the package names that would be required to run the code.

Usage

```
parse_packages(fl)
```

Arguments

fl	file to parse for required package names

Details

This function uses regular expressions to search through a file containing R code to find required package names. It extracts not only package names denoted by library and require, but also packages not attached to the global namespace, but are still called with :: or :::.

Because it relies on regular expressions, it assumes all packages adhere to the valid CRAN package name rules (contain only ASCII letters, numbers, and dot; have at least two characters and start with a letter and not end it a dot). Code is also tidying internally, making the code more predictable and easier to parse (removes comments, adds whitespace around operators, etc). R Markdown files are also supported by extracting only R code using purl.

Value

a vector of package names as character strings

See Also

install_package_guess, automagic

Examples

```
## Not run:
cat('library(ggplot2)\n # library(curl)\n require(leaflet)\n CB::date_print()\n',file='temp.R')
parse_packages('temp.R')
unlink('temp.R')

## End(Not run)
```

%>% *Pipe imported from magrittr*

Description

Pipe imported from magrittr

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