

Package ‘automagic’

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Type Package

Title Automagically Document and Install Packages Necessary to Run R Code

Version 0.3

Author Cole Brokamp

Maintainer Cole Brokamp <cole.brokamp@gmail.com>

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 5.0.1

Depends R (>= 3.1.0)

Imports knitr, formatR, pacman, githubinstall, magrittr, dplyr, purrr, devtools, remotes, yaml

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

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

NeedsCompilation no

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automagic	<i>Automagically install all required R packages</i>
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Description

Searches a given directory for all R and R Markdown files, parses them for required packages and attempts to install them from CRAN or GitHub. 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	<i>get packages required to run R code</i>
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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 package from CRAN or GitHub based on best guess*

Description

If a package is not available in the R library, attempt to install it from CRAN. If not available on CRAN, attempt to install the package from GitHub based on the "best guess". If R is running interactively, then the user will be prompted before installing GitHub packages.

Usage

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

Arguments

<code>pkg</code>	name of package to install
<code>force_install</code>	install even if package is in library (warning! this could install a newer or older version of an already installed package)
<code>prompt</code>	prompt the user to install a GitHub 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](#)

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(f1)
```

Arguments

f1 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 `pur1`.

Value

a vector of package names as character strings

See Also

[install_package_guess](#), [automagic](#)

Examples

```
cat('library(ggplot2)\n # library(curl)\n require(leaflet)\n CB::date_print()\n',file='temp.R')
parse_packages('temp.R')
unlink('temp.R')
```

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