

Package ‘MSDproject’

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Type Package

Title Project and Code Management

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Description Create and manage standardised data analysis directories with private package libraries and links to external code repositories.

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LazyData TRUE

RoxygenNote 6.1.1

Suggests covr,
testthat,
git2r,
rmarkdown

Imports devtools,
magrittr,
packrat,
tidyverse

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attach_code_library	<i>Attach code library</i>
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Description

Attaches a path(s) to to the code library search path

Usage

```
attach_code_library(path)
```

Arguments

path	character vector with paths to attach to
------	--

check_if_MSDproject	<i>Check if directory is a MSDproject</i>
---------------------	---

Description

Check if directory is a MSDproject

Usage

```
check_if_MSDproject(directory = getwd(), return_logical = FALSE)
```

Arguments

directory character. working directory (default = current working directory)

return_logical logical. If true will return FALSE instead of error

check_session	<i>Check MSDproject for best practice compliance</i>
---------------	--

Description

Check MSDproject for best practice compliance

Usage

```
check_session(proj_name = getwd(), silent = FALSE,  
              check_rstudio = TRUE)
```

Arguments

proj_name character. default = current working directory. path to directory.

silent logical. default = FALSE. suppress messages or not

check_rstudio logical (default = FALSE). Check rstudio studio project directory

code_library	<i>Show Code Library</i>
--------------	--------------------------

Description

Show Code Library

Usage

```
code_library(extn = NULL, fields = "Description", viewer = TRUE,
             silent = FALSE, return_info = FALSE)
```

Arguments

extn	vector string of extensions to include
fields	character vector of fields to extract
viewer	logical indicating if viewer should be used to display results (default=FALSE)
silent	logical indicating if messages should be silenced (default=FALSE)
return_info	logical (default = FALSE). Return data.frame of results (FALSE= returns file paths)

code_library_path	<i>Display code library search path</i>
-------------------	---

Description

Display code library search path

Usage

```
code_library_path()
```

code_snapshot_files	<i>Git commit of ctl files, SourceData and Scripts</i>
---------------------	--

Description

This function should not be used directly.

Usage

```
code_snapshot_files(message = "created automatic snapshot",
                    session = TRUE, files_to_stage, ...)
```

Arguments

message	character. Description to be added to commit
session	logical. Should sessionInfo be included in commit message
files_to_stage	character vector. file paths to add to commit
...	additional arguments for git2r::commit

commit_file	<i>commit individual file(s)</i>
-------------	----------------------------------

Description

Has side effect that staged changed will be updated to working tree

Usage

```
commit_file(file_name)
```

Arguments

file_name character vector. File(s) to be committed

Examples

```
## Not run:  
commit_file("Scripts/script1.R")  
  
## End(Not run)
```

copy_file	<i>Copy file to project directory</i>
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Description

Will copy any file from an external location (e.g. code library) into project No modification of that file will take place

Usage

```
copy_file(from, dest, overwrite = FALSE, alt_paths,  
          version_control = FALSE)
```

Arguments

from character. file name or path of file to copy
dest character. file name file to create
overwrite logical. Overwrite 'to' file if exists?
alt_paths character vector. paths to other candidate files to search
version_control logical. Should file be added to version control (default = FALSE)

copy_script	<i>Copy script to project directory</i>
-------------	---

Description

Will search code library and copy script and dependencies into scripts directory. Script will also be stamped with source location, time and user information

Usage

```
copy_script(from, to, dependencies = TRUE, stamp_copy = TRUE,
            overwrite = FALSE, comment_char = "#", alt_paths, proj_path = ".")
```

Arguments

from	character. file name or path of file to copy
to	character. file name file to create
dependencies	logical. Default = TRUE. will script copy dependencies
stamp_copy	logical. Create a commented timestamp at beginning of file
overwrite	logical. Overwrite 'to' file if exists?
comment_char	character. Comment character
alt_paths	character vector. paths to other candidate files to search
proj_path	character. Default = current working directory. path to MSDproject

dependency_tree	<i>Create a recursive dependency_tree of file names</i>
-----------------	---

Description

Create a recursive dependency_tree of file names

Usage

```
dependency_tree(from, already_got = NULL)
```

Arguments

from	character. file name or path of file to copy
already_got	logical. Default = NULL. If true will terminate loop Used by copy_script. Creates an an ordered vector of script dependencies.

do_test	<i>Testing interfact</i>
---------	--------------------------

Description

Testing interfact

Usage

```
do_test(..., silent = FALSE, append = data.frame())
```

Arguments

...	named expression to evaluate
silent	logical. Default = FALSE. Should messages be printed.
append	data.frame. Default = empty. Existing set of results to append to

get_github_code_library	<i>Download code repositor from github</i>
-------------------------	--

Description

Download code repositor from github

Usage

```
get_github_code_library(local_path, giturl, config_file)
```

Arguments

local_path	character. Path to install repository
giturl	character. URL to github repository
config_file	character. Name of config file (e.g. "~/.Rprofile")

get_script_field	<i>Get field from a code file</i>
------------------	-----------------------------------

Description

Get field from a code file

Usage

```
get_script_field(file_name, field_name, n = 10)
```

Arguments

file_name	character. path to file
field_name	character. name of field to find.
n	numeric. number of lines of each file to search

info_scripts	<i>List information about scripts</i>
--------------	---------------------------------------

Description

List information about scripts

Usage

```
info_scripts(files, fields = c("Description"), viewer = TRUE,
  silent = FALSE, base_dirs = NULL, shorten_paths = TRUE)
```

Arguments

files	vector string of file names/paths
fields	vector string of field tags to display
viewer	logical indicating if Rstudio viewer should be used (default = TRUE)
silent	run in quiet mode (default=FALSE)
base_dirs	character vector. group files together that belong to these directory paths
shorten_paths	logical. Default = TRUE. Long paths will be shortened if true in displayed output (not returned object)

Examples

```
## Not run:
ls_scripts('~ /AZD6094/PK_liver4/') %>%
  info_scripts('Description') %>%
  filter(grepl('mod',DESCRIPTION))

## End(Not run)
```

is_full_path	<i>Test if full path</i>
--------------	--------------------------

Description

Test if full path

Usage

```
is_full_path(x)
```

Arguments

x string giving file/path name

Value

TRUE only when path starts with ~, /, \ or X: (i.e. when x is a full path), FALSE otherwise

Examples

```
## Not run:  
is_full_path('file.text.ext')  
is_full_path('/path/to/file.text.ext')  
  
## End(Not run)
```

is_rstudio	<i>Logical flag for detecting if R session is on rstudio not</i>
------------	--

Description

Logical flag for detecting if R session is on rstudio not

Usage

```
is_rstudio()
```

locate_file	<i>Locate file from search path</i>
-------------	-------------------------------------

Description

Finds first file in search_path that exists

Usage

```
locate_file(x, search_path = c("."), recursive = FALSE)
```

Arguments

x	string for file name
search_path	vector of strings giving search path
recursive	logical. Default TRUE. whether to do recursive search or not

Value

Path of located file. Returns error if file not found.

Examples

```
## Not run:  
locate_file('script.R',c('.', 'Scripts')) ## looks in current working directory, then Scripts folder  
  
## End(Not run)
```

ls_code_library	<i>List files in code library</i>
-----------------	-----------------------------------

Description

List files in code library

Usage

```
ls_code_library()
```

ls_scripts	<i>List scripts</i>
------------	---------------------

Description

List scripts

Usage

```
ls_scripts(folder = ".", extn = "r|R", recursive = TRUE)
```

Arguments

folder	string describing folder to search recursively in
extn	character (can be regex) giving extension to limit search to
recursive	by default TRUE

Examples

```
## Not run:
ls_scripts('~ /AZD6094/PK_liver4/') %>%
  info_scripts('Description') %>%
  filter(grepl('mod', DESCRIPTION))

## End(Not run)
```

make_local_bare	<i>create local bare repository</i>
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Description

create local bare repository

Usage

```
make_local_bare(proj_name = getwd())
```

Arguments

proj_name	character vector indicating path to MSDproject
-----------	--

make_project	<i>Create new_project</i>
--------------	---------------------------

Description

Creates directory structure. User install MSDproject again in

Usage

```
make_project(proj_name, keep_readme_file = TRUE,
             remove_user_lib = TRUE, overwrite_rprofile = TRUE)
```

Arguments

proj_name	character string of full path to new_project
keep_readme_file	logical (default=TRUE) if you do not want to see readme files in project use FALSE
remove_user_lib	logical (default=TRUE) if TRUE will attempt to remove user R package library from .libPaths()
overwrite_rprofile	logical. should project .Rprofile be overwritten (default=FALSE)

models_dir	<i>Shortcut to Models directory</i>
------------	-------------------------------------

Description

Shortcut to Models directory

Usage

```
models_dir(proj_name = getwd())
```

Arguments

proj_name	character. Working directory (default = getwd())
-----------	--

Description

MSDproject is designed to manage tidy project directories and facilitate reproducibility and reuse of code

Strategy

- Code management
 - Project structure: Defines standardised directory structure for statistical projects
 - Long term reproducibility: Local (project level) installation of packages
 - Code sharing/reuse: code library + search functionality

Options

`scripts.dir` = names of the 'scripts' directory in the project

`models.dir` = names of the 'models' directory in the project

`git.exists` = TRUE if git is installed (only works on unix currently)

`code_library_path` = character vector. paths of directories containing code files

To modify these options use the `options()` interface. To modify these values permanently set `options()` in `~/.Rprofile` or `R_HOME/etc/Rprofile.site`

Examples

```
## Not run:
make_project('~/.MSDXXX/PKAE1')      ## creates new_project
code_library()                        ## display summary of code_library
preview('template1.R')               ## preview file in code_library
copy_script('template1.R')            ## copy_script from code_library to project

new_script('test.R')                  ## Creates empty test.R
copy_script('output.data.R')          ## copies from code_library
copy_script('../pathto/script.R')      ## copies from other location

## End(Not run)
```

Description

Create new R script

Usage

```
new_script(name, overwrite = FALSE, open_file = TRUE,
  libs = c("MSDproject"))
```

Arguments

name	character indicating name of script to create
overwrite	logical. Whether to overwrite existing file (default = FALSE)
open_file	logical. Whether function should open script (default = TRUE)
libs	character. What libraries to add.

preview	<i>Preview code_library file</i>
---------	----------------------------------

Description

Preview code_library file

Usage

```
preview(name)
```

Arguments

name	character indicating script in code_library to preview
------	--

pull_repo	<i>pull repository</i>
-----------	------------------------

Description

pull repository

Usage

```
pull_repo(local_path)
```

Arguments

local_path	character. Path to repository
------------	-------------------------------

reexports	<i>Objects exported from other packages</i>
-----------	---

Description

These objects are imported from other packages. Follow the links below to see their documentation.

magrittr [%>%](#)

Renvironment_info	<i>Make R session record</i>
-------------------	------------------------------

Description

Create a record of the R version and package versions used in a particular MSDproject

Usage

```
Renvironment_info()
```

replace_code_library	<i>Replaces code library</i>
----------------------	------------------------------

Description

Replace code library search path with path(s)

Usage

```
replace_code_library(path)
```

Arguments

path	character vector with paths to attach to
------	--

resetwd	<i>Reset working directory to rstudio working directory</i>
---------	---

Description

Reset working directory to rstudio working directory

Usage

```
resetwd()
```

scripts_dir	<i>Shortcut to Scripts directory</i>
-------------	--------------------------------------

Description

Shortcut to Scripts directory

Usage

```
scripts_dir(proj_name = getwd())
```

Arguments

proj_name	character. Working directory (default = getwd())
-----------	--

search_field	<i>Search for files matching field values</i>
--------------	---

Description

Search for files matching field values

Usage

```
search_field(files, field, text)
```

Arguments

files	vector string of file names/paths
field	character. field name (can be regex) to search for
text	string (can be regex) to search for

search_keyword	<i>Search for files matching key words</i>
----------------	--

Description

Search for files matching key words

Usage

```
search_keyword(files, text)
```

Arguments

files	vector string of file names/paths
text	string (can be regex) to search for

search_raw	<i>Search for files matching raw text search</i>
------------	--

Description

Search for files matching raw text search

Usage

```
search_raw(files, text, search_title = TRUE, search_contents = TRUE)
```


Arguments

files	vector string of file names/paths
text	string (can be regex) to search for
search_title	logical (default=TRUE). should matching occur in title
search_contents	logical (default=TRUE). should matching occur in file contents

 setup_file

Setup files

Description

This function should not be used directly. Only exported for use by dependent packages

Usage

```
setup_file(file_name, version_control = getOption("git.exists"))
```

Arguments

file_name	character. Indicating name of file to set up
version_control	logical. Should file be added to version control

 set_project_opts

Set project options

Description

Set project options

Usage

```
set_project_opts()
```

 short_path

shorten path name

Description

shorten path name

Usage

```
short_path(x)
```

Arguments

x	character vector. Path to shorten.
---	------------------------------------

snapshot2	<i>Git commit of ctl files, SourceData and Scripts</i>
-----------	--

Description

Git commit of ctl files, SourceData and Scripts

Usage

```
snapshot2(message = "created automatic snapshot", session = TRUE, ...)
```

Arguments

message	character. Description to be added to commit
session	logical. Should sessionInfo be included in commit message
...	additional arguments for git2r::commit

system_cmd	<i>system/shell command wrapper</i>
------------	-------------------------------------

Description

system/shell command wrapper

Usage

```
system_cmd(cmd, dir = ".", ...)
```

Arguments

cmd	character. command to send to shell
dir	character. directory to run command in
...	other arguments passed to system command

wait_for	<i>Wait for statement to be true</i>
----------	--------------------------------------

Description

Wait for statement to be true

Usage

```
wait_for(x, timeout = NULL, interval = 1)
```

Arguments

x	expression to evaluate
timeout	numeric. Maximum time (seconds) to wait
interval	numeric. Number of seconds (default=1s) to wait till rechecking

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