Package 'matlabr'

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Type Package

Title An Interface for MATLAB using System Calls

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Description Provides users to call MATLAB from using the ``system" command.
Allows users to submit lines of code or MATLAB m files.
This is in comparison to 'R.matlab', which creates a MATLAB server.

Imports stringr

License GPL-2

Encoding UTF-8

SystemRequirements MATLAB

BugReports https://github.com/muschellij2/matlabr/issues

RoxygenNote 6.1.0

Suggests covr

NeedsCompilation no

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Contents

`add_path` *Create PATHs to add to MATLAB PATHs*

Description

Create PATHs to add to MATLAB PATHs

Usage

```
add_path(path)

gen_path(path)

add_gen_path(path)
```

Arguments

`path`	path to add

Value

A character vector

Examples

```
add_path("~/")
gen_path("~/")
gen_path("~/")
```

`get_matlab` *Find matlab path*

Description

This tries to find matlab's path using a system which command, and then, if not found, looks at `getOption("matlab.path")`. If not path is found, it fails.

Usage

```
get_matlab(try_defaults = TRUE, desktop = FALSE, splash = FALSE,
  display = FALSE, wait = TRUE, single_thread = FALSE)
```

Arguments

try_defaults	(logical) If matlab is not found from Sys.which, and matlab.path not found, then try some default PATHs for Linux and OS X.
desktop	Should desktop be active for MATLAB?
splash	Should splash be active for MATLAB?
display	Should display be active for MATLAB?
wait	Should R wait for the command to finish. Both passed to system and adds the -wait flag.
single_thread	Should the flag -singleCompThread be executed to limit MATLAB to a single computational thread?

Value

Character of command for matlab

Examples

```
if (have_matlab()) {
get_matlab()
}
```

---

have_matlab *Logical check if MATLAB is accessible*

Description

Uses get_matlab to check if MATLAB's path accessible

Usage

```
have_matlab()
```

Value

Logical TRUE is MATLAB is accessible, FALSE if not

Examples

```
have_matlab()
```

rmat_to_matlab_mat *Convert R matrix to matlab matrix*

Description

This function takes in an R matrix then turns it into a matrix in matlab

Usage

```
rmat_to_matlab_mat(x, matname = NULL, transpose = FALSE)
```

Arguments

x	matrix of values
matname	Object in matlab to be assigned
transpose	Transpose the matrix

Value

Character scalar of matlab code

run_matlab_code *Runs matlab code*

Description

This function takes in matlab code, where the last line must end with a ;, and returns the exit status

Usage

```
run_matlab_code(code, endlines = TRUE, verbose = TRUE,
  add_clear_all = FALSE, paths_to_add = NULL, ...)
```

Arguments

code	Character vector of code.
endlines	Logical of whether the semicolon (;) should be pasted to each element of the vector.
verbose	Print out filename to run
add_clear_all	Add `clear all;` to the beginning of code
paths_to_add	Character vector of PATHs to add to the script using `add_path`
...	Options passed to `run_matlab_script`

Value

Exit status of matlab code

Examples

```
if (have_matlab()){
   run_matlab_code(c("disp('The version of the matlab is:')", "disp(version)"),
   paths_to_add = "~/")
}
## Not run:
if (have_matlab()){
   run_matlab_code("disp(version)")
   run_matlab_code("disp(version)", paths_to_add = "~/")
   run_matlab_code(c("x = 5", "disp(['The value of x is ', num2str(x)])"))
}

## End(Not run)
```

`run_matlab_script` *Run matlab script*

Description

This function runs a matlab script, and returns exit statuses

Usage

```
run_matlab_script(fname, verbose = TRUE, desktop = FALSE,
  splash = FALSE, display = FALSE, wait = TRUE,
  single_thread = FALSE, ...)
```

Arguments

`fname`	Filename of matlab script (.m file)
`verbose`	print diagnostic messages
`desktop`	Should desktop be active for MATLAB?
`splash`	Should splash be active for MATLAB?
`display`	Should display be active for MATLAB?
`wait`	Should R wait for the command to finish. Both passed to `system` and adds the `-wait` flag.
`single_thread`	Should the flag `-singleCompThread` be executed to limit MATLAB to a single computational thread?
`...`	Options passed to `system`

Value

Exit status of matlab code

rvec_to_matlab *Convert R vector to matlab cell mat*

Description

This function takes in an R numeric and returns a status

Usage

```
rvec_to_matlab(x, row = FALSE, sep = NULL, matname = NULL)
```

Arguments

x	Numeric vector of values
row	Create row vector instead of column vector
sep	separator to use to separate cells. Will override row argument
matname	Object in matlab to be assigned

Value

Character scalar of matlab code

rvec_to_matlabcell *Convert R vector to matlab cell*

Description

This function takes in an R vector then turns it into a cell

Usage

```
rvec_to_matlabcell(x, sep = ";", matname = NULL, transpose = FALSE)
```

Arguments

x	Character vector of values
sep	separator to use to separate values. Defaults to ";" argument
matname	Object in matlab to be assigned
transpose	Transpose the cell

Value

Character scalar of matlab code

`rvec_to_matlabclist` *Convert R vector to matlab cell mat*

Description

This function takes in an R vector then turns it into a cell list

Usage

```
rvec_to_matlabclist(x, matname = NULL)
```

Arguments

`x`	Character vector of values
`matname`	Object in matlab to be assigned

Value

Character scalar of matlab code

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