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
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Described

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("-/")
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

```r
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

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**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`
run_matlab_script

Value

Exit status of matlab code

Examples

```r
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

```r
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
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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