

# Package: matlabr (via r-universe)

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**Type** Package

**Title** An Interface for MATLAB using System Calls

**Version** 1.6.0

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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/muschelli2/matlabr/issues>

**RoxygenNote** 7.1.0

**Suggests** covr

**Repository** <https://muschelli2.r-universe.dev>

**RemoteUrl** <https://github.com/muschelli2/matlabr>

**RemoteRef** HEAD

**RemoteSha** e14056fba50d2ba1e9c96c3b90221023390c2b1a

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add_path	<i>Create PATHs to add to MATLAB PATHs</i>
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**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	<i>Find matlab path</i>
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**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,
  jvm = TRUE,
  figure_windows = TRUE,
  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?
jvm	should JVM be loaded? If FALSE, then -nojvm
figure_windows	should figure windows be enabled. If not, -noFigureWindows will be called
wait	Should R wait for the command to finish. Both passed to <code>system</code> 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	<i>Convert R matrix to matlab matrix</i>
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---

**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	<i>Runs matlab code</i>
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---

**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 <a href="#">add_path</a>
...	Options passed to <a href="#">run_matlab_script</a>

**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()){
    system.time({
        run_matlab_code(c("disp('The version of the matlab is:)',
            "disp(version)"), jvm = FALSE,
            figure_windows = FALSE)
    })
    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,
jvm = TRUE,
figure_windows = TRUE,
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?
jvm	should JVM be loaded? If FALSE, then -nojvm
figure_windows	should figure windows be enabled. If not, -noFigureWindows will be called
wait	Should R wait for the command to finish. Both passed to <code>system</code> and adds the -wait flag.
single_thread	Should the flag -singleCompThread be executed to limit MATLAB to a single computational thread?
...	Options passed to <code>system</code>

### Value

Exit status of matlab code

---

rvec_to_matlab	<i>Convert R vector to matlab cell mat</i>
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### 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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