Package: gretlR (via r-universe)

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Type Package

Title A Seamless Integration of 'Gretl' and 'R'

Version 0.1.4

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Description It allows running 'gretl' (<http://gretl.sourceforge.net/index.html>) program from R, R Markdown and Quarto. 'gretl' ('Gnu' Regression, 'Econometrics', and Time-series Library) is a statistical software for Econometric analysis. This package does not only integrate 'gretl' and 'R' but also serves as a 'gretl' Knit-Engine for 'knitr' package. Write all your 'gretl' commands in 'R', R Markdown chunk.

Depends R (>= 3.6.0)

Imports knitr (>= 1.20), rmarkdown, kableExtra, magrittr

SystemRequirements gretl (>= 1.9.4)

License GPL

URL https://CRAN.R-project.org/package=gretlR

BugReports https://github.com/sagirumati/gretlR/issues

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VignetteBuilder knitr

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Contents

`gretlR-package` *gretlR: A Seamless Integration of 'Gretl' and 'R'*

Description

It allows running 'gretl' (http://gretl.sourceforge.net/index.html) program from R, R Markdown and Quarto. 'gretl' ('Gnu' Regression, 'Econometrics', and Time-series Library) is a statistical software for Econometric analysis. This package does not only integrate 'gretl' and 'R' but also serves as a 'gretl' Knit-Engine for 'knitr' package. Write all your 'gretl' commands in 'R', R Markdown chunk.

Author(s)

Maintainer: Sagiru Mati <smati@smati.com.ng> (ORCID)

See Also

Useful links:

- https://CRAN.R-project.org/package=gretlR
- Report bugs at https://github.com/sagirumati/gretlR/issues

Other important functions: `eng_gretl()`, `exec_gretl()`, `exec_inp()`, `import_kable()`, `include_graph()`, `include_tex()`, `write_inp()`

eng_gretl *Add* gretl *as knit-engine to knitr package*

Description

This package runs on top of knitr to facilitate communication with gretl. Run gretl scripts from R, R Markdown and Quarto document.

Usage

```
eng_gretl(options)
```

Arguments

options	Chunk options, as provided by knitr during chunk execution. Chunk option for this is gretl

Details

The gretl engine can be activated via

```
knitr::knit_engines$set(gretl = gretlR::eng_gretl)
```

This will be set within an R Markdown document's setup chunk.

Value

Set of gretl (open-source software for Econometrics) codes

Author(s)

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- SMATI Academy

References

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See Also

Other important functions: `exec_gretl()`, `exec_inp()`, `gretlR`, `import_kable()`, `include_graph()`, `include_tex()`, `write_inp()`

Examples

```
knitr::knit_engines$set(gretl = gretlR::eng_gretl)
library(gretlR)
```

`exec_gretl` *Execute* `gretl` *codes in R*

Description

Use this function to Execute `gretl` codes in R.

Usage

```
exec_gretl(code,path=basename(tempfile("gretlR")))
```

Arguments

`code`	Object or a character string representing the set of `gretl` codes
`path`	Object or a character string representing the directory to execute the `gretl` codes (default: `gretlR`)

Value

Set of `gretl` (open-source software for Econometrics) outputs

See Also

Other important functions: `eng_gretl()`, `exec_inp()`, `gretlR`, `import_kable()`, `include_graph()`, `include_tex()`, `write_inp()`

Examples

```
library(gretlR)
## Not run:
code=r'(nulldata 500
set seed 13
gretl1 = normal()
gretl2 = normal()
setobs 12 1980:01 --time-series
gnuplot gretl1 --time-series --with-lines --output="line.png"
gnuplot gretl2 gretl1 --output="scatter.png"
)'
exec_gretl(code)

## End(Not run)
```

`exec_inp` *Execute existing* `gretl inp` *file(s) in R*

Description

Use this function to execute existing `gretl inp` file(s) in R

Usage

```
exec_inp(path=".")
```

Arguments

`path`	Object or a character string representing the path(s) to the `gretl` file(s). (default: ".")

Value

Set of `gretl` (open-source software for Econometrics) outputs

See Also

Other important functions: `eng_gretl()`, `exec_gretl()`, `gretlR`, `import_kable()`, `include_graph()`, `include_tex()`, `write_inp()`

Examples

```
library(gretlR)
## Not run:
code=r'(nulldata 500
set seed 13
gretl1 = normal()
gretl2 = normal()
setobs 12 1980:01 --time-series
```

```
gnuplot gretl1 --time-series --with-lines --output="line.png"
gnuplot gretl2 gretl1 --output="scatter.png"
)'
write_inp(code,path="SomeFolder/gretlCodes")
exec_inp("SomeFolder/gretlCodes")


## End(Not run)
```

`import_kable` *Import file as* `kable` *in R Markdown or Quarto document.*

Description

Use this function to import file as `kable` in R Markdown or Quarto document.

Usage

```
import_kable(path=".",chunk="",file="",start=NA,end=NA,skip_blank=TRUE,
format=kable_format(),digits = getOption("digits"), row.names = NA,col.names = NA, align,
caption = NULL,
 label = NULL, format.args = list(),escape = FALSE, table.attr = "", booktabs = TRUE,
   longtable = FALSE, valign = "t",position = "h", centering = TRUE,
   vline = getOption("knitr.table.vline",if (booktabs) "" else "|"),
toprule = getOption("knitr.table.toprule",
if (booktabs) "\\toprule" else "\\hline"),
bottomrule = getOption("knitr.table.bottomrule",
if (booktabs) "\\bottomrule" else "\\hline"),
midrule = getOption("knitr.table.midrule",
if (booktabs) "\\midrule" else "\\hline"),
linesep = if (booktabs) c("","", "", "", "\\addlinespace") else "\\hline",
 caption.short = "",table.envir = if (!is.null(caption)) "table",...)
```

Arguments

`path`	Object or a character string representing the path(s) to the `TeX` (default: `"."`)
`chunk`	Name of the `gretl` chunk that generates the `TeX` file.
`file`	Name of a file to be imported as `kable`
`start`	Numeric. The start line of the `TeX` file to include.
`end`	Numeric. The last line of the `TeX` file to include.
`skip_blank`	Logical. Whether or not to include blank rows.
`format`	A character string. Possible values are `latex`, `html`, `pipe` (Pandoc's pipe tables), `simple` (Pandoc's simple tables), `rst`, `jira`, and `org` (Emacs Org-mode). The value of this argument will be automatically determined if the function is called within a **knitr** document. The `format` value can also be set in the global option `knitr.table.format`. If `format` is a function, it must return a character string.

digits	Maximum number of digits for numeric columns, passed to round(). This can also be a vector of length ncol(x), to set the number of digits for individual columns.
row.names	Logical: whether to include row names. By default, row names are included if rownames(x) is neither NULL nor identical to 1:nrow(x).
col.names	A character vector of column names to be used in the table.
align	Column alignment: a character vector consisting of 'l' (left), 'c' (center) and/or 'r' (right). By default or if align = NULL, numeric columns are right-aligned, and other columns are left-aligned. If length(align) == 1L, the string will be expanded to a vector of individual letters, e.g. 'clc' becomes c('c', 'l', 'c'), unless the output format is LaTeX.
caption	The table caption.
label	The table reference label. By default, the label is obtained from knitr::opts_current$get('label'). To disable the label, use label = NA.
format.args	A list of arguments to be passed to format() to format table values, e.g. list(big.mark = ',').
escape	Boolean; whether to escape special characters when producing HTML or LaTeX tables. When escape = FALSE, you have to make sure that special characters will not trigger syntax errors in LaTeX or HTML.
table.attr	A character string for addition HTML table attributes. This is convenient if you simply want to add a few HTML classes or styles. For example, you can put 'class="table" style="color: red"'.
booktabs	T/F for whether to enable the booktabs format for tables. I personally would recommend you turn this on for every latex table except some special cases.
longtable	T/F for whether to use the longtable format. If you have a table that will span over two or more pages, you will have to turn this on.
valign	You probably won't need to adjust this latex option very often. If you are familar with latex tables, this is the optional position for the tabular environment controling the vertical position of the table relative to the baseline of the surrounding text. Possible choices are b, c and t (default).
position	This is the "real" or say floating position for the latex table environment. The kable only puts tables in a table environment when a caption is provided. That is also the reason why your tables will be floating around if you specify captions for your table. Possible choices are h (here), t (top, default), b (bottom) and p (on a dedicated page).
centering	T (default)/F. Whether to center tables in the table environment.
vline	vertical separator. Default is nothing for booktabs tables but "|" for normal tables.
toprule	toprule. Default is hline for normal table but toprule for booktabs tables.
bottomrule	bottomrule. Default is hline for normal table but bottomrule for booktabs tables.
midrule	midrule. Default is hline for normal table but midrule for booktabs tables.

linesep	By default, in booktabs tables, kable insert an extra space every five rows for clear display. If you don't want this feature or if you want to do it in a different pattern, you can consider change this option. The default is c(", ", ", ", '\addlinespace'). Also, if you are not using booktabs, but you want a cleaner display, you can change this to ".
caption.short	Another latex feature. Short captions for tables
table.envir	You probably don't need to change this as well. The default setting is to put a table environment outside of tabular if a caption is provided.
...	Other arguments (see Examples and References).

Value

kable

See Also

Other important functions: eng_gretl(), exec_gretl(), exec_inp(), gretlR, include_graph(), include_tex(), write_inp()

Examples

```
library(gretlR)
## Not run:
code=r'(nulldata 500
set seed 13
gretl1 = normal()
gretl2 = normal()
setobs 12 1980:01 --time-series
ols gretl1 const gretl2
tabprint --output="olsTable.csv")'

exec_gretl(code=code,path='gretlR/Table/gretlCode') # this creates 'gretlR/Table' folder

import_kable(chunk = "Table",file = "olsTable.csv",format="pandoc",caption="Table generated
from gretl chunk", start=3,end=7,digits=2)

# Alternatively, use the absolute/relative path to the file

import_kable(path = "gretlR/Table/olsTable.csv",format="pandoc",caption="Table generated
 from path", start=3,end=7,digits=2)

## End(Not run)
```

---

include_graph *Include graph file in R Markdown or Quarto document.*

Description

Use this function to include graph file in R Markdown or Quarto document.

Usage

```
include_graph(path=".",chunk="",graph="")
```

Arguments

path	Object or a character string representing the path(s) to the TeX (default: ".")
chunk	Name of the gretl chunk that generates the TeX file.
graph	Name of the graph and its extension

Value

Set of gretl (open-source software for Econometrics) outputs

See Also

Other important functions: eng_gretl(), exec_gretl(), exec_inp(), gretlR, import_kable(), include_tex(), write_inp()

Examples

```
library(gretlR)
## Not run:
code=r'(nulldata 500
set seed 13
gretl1 = normal()
gretl2 = normal()
setobs 12 1980:01 --time-series
gnuplot gretl1 --time-series --with-lines --output="line.png"
)'
exec_gretl(code)

include_graph(path="line.png")


## End(Not run)
```

---

include_tex *Include TeX file in R Markdown or Quarto document.*

Description

Use this function to include TeX file in R Markdown or Quarto document.

Usage

```
include_tex(path=".",chunk="",tex="",start=NA,end=NA)
```

Arguments

path	Object or a character string representing the path(s) to the TeX (default: ".")
chunk	Name of the gretl chunk that generates the TeX file.
tex	Name of a LaTeX file
start	Numeric. The start line of the TeX file to include.
end	Numeric. The last line of the TeX file to include.

Value

Set of gretl (open-source software for Econometrics) outputs

See Also

Other important functions: eng_gretl(), exec_gretl(), exec_inp(), gretlR, import_kable(), include_graph(), write_inp()

Examples

```
library(gretlR)
## Not run:
code=r'(nulldata 500
set seed 13
gretl1 = normal()
gretl2 = normal()
setobs 12 1980:01 --time-series
ols gretl1 const gretl2
tabprint --output="olsTable.tex")'

exec_gretl(code=code,path='gretlR/TeXFolder/gretlCode')

include_tex(chunk="TeXFolder",tex="olsTable")

# Alternatively, use the absolute/relative path to the TeX file

include_tex("gretlR/TeXFolder/olsTable.tex")

## End(Not run)
```

---

write_inp *Write* gretl inp *file in R*

Description

Use this function to write gretl inp file in R

Usage

```
write_inp(code,path)
```

Arguments

code	Object or a character string representing the set of gretl codes
path	Object or a character string representing the path to write the gretl inp file.

Value

Set of gretl (open-source software for Econometrics) outputs

See Also

Other important functions: eng_gretl(), exec_gretl(), exec_inp(), gretlR, import_kable(), include_graph(), include_tex()

Examples

```
library(gretlR)
## Not run:
code=r'(nulldata 500
set seed 13
gretl1 = normal()
gretl2 = normal()
setobs 12 1980:01 --time-series
gnuplot gretl1 --time-series --with-lines --output="line.png"
gnuplot gretl2 gretl1 --output="scatter.png"
)'
write_inp(code,path="gretlCodes")

## End(Not run)
```

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