Backpack

December 17, 2018

Type Package

Title Easily discover, collect, and learn to use packages for statiscal modeling.

Version 0.1.0

Author Bianca Brusco, Andrea Hassler, Kaushik Mohan, and Madison Volpe

Maintainer Kaushik Mohan <kaushik.s.mohan@nyu.edu>

Description Use built-in binders (collections) of packages for topics in statistics.
Create your own binders to store colelctions of packages for easy installing and load-
ing within your projects. Also, explore lessons on multivariate statistical modeling in R.

License GPL (>=2)

URL https://github.com/priism-center/backpack

BugReports https://github.com/priism-center/backpack/issues

Encoding UTF-8

LazyData true

RoxygenNote 6.1.0.9000

Imports dplyr,
learnr,
devtools

R topics documented:

---

bind_packages   *Bind Packages*

Description

Function to add packages to existing binders to the user views, or to create new binders to store packages

Usage

```
bind_packages(package, binder, source, suggest)
```

Arguments

package	: new packages to add
binder	: either an existing binder or a new user-defined binder
source	: whether package source is CRAN or Github Repo. If the source is a GitHub repo, please provide the 'username/repo[/subdir]'
suggest	: default = TRUE. Boolean indicating whether want suggestions on existing packages. Once you chose the final name, set suggest = FALSE to either add packages to an existing binder or create a new binder.

Examples

```
bind_packages(Package = c("a","b","c"), Binder = "alphabets", source = "CRAN", suggest = FALSE)
```

---

install_binders   *Install Binders*

Description

Function to install the packages in the binders.

Usage

```
install_binders(binders)
```

Arguments

binders	The binder to install

Examples

```
install_binders("MLM")

install_binders()
```

`list_lessons`   *List Lessons*

Description

Function to list available lessons.

Usage

```
list_lessons()
```

Examples

```
list_lesson()
```

`load_binders`   *Load Binders*

Description

Function to load the packages in a binder(s).

Usage

```
load_binders(binders)
```

Arguments

binders   character vector of binder names. The binder(s) whose packages are to be loaded
                 into the environment.

Examples

```
load_binders("MLM")
```

---

seeds *Seeds Dataset*

Description

Measurements of geometrical properties of kernels belonging to three different varieties of wheat. Adapted from the dataset taken from the UCI Machine Learning Repository.

Usage

```
data(seeds)
```

Format

A dataframe of 210 observations of 8 variables.

area area of kernel

perimeter perimeter of kernel

compact compactness of kernel given by C = 4*pi*A/P^2

length length of kernel

width width of kernel

asymm asymmetry coefficient

groove length of kernel groove

variety variety of wheat: 1 = Kama, 2 = Rosa and 3 = Canadian

Source

UCI Machine Learning Repository

---

start_lesson *Start Lesson*

Description

Function to start a lesson.

Usage

```
start_lesson(lesson_name)
```

Arguments

lesson_name   Name of the lesson to learn.

Details

This can also be done using the learnr package as follows 'learnr::run_tutorial("2004-MatrixAlgebra",package="backpack It must be noted that when using this, the packages needed for the tutorial aren't automatically loaded. It is recommended to use start_lesson.

Examples

```
start_lesson(name="2004-MatrixAlgebra")

start_lesson()
```

---

unbind_packages	*Unbind Packages*

Description

Function to remove packages from existing binders, or entire binders, from user views.

Usage

```
unbind_packages(Package, binder)
```

Arguments

package	: package(s) to remove. Pass a vector if multiple packages.
binder	: specifies the binder from which Packages need to be removed. If Packages is NULL, will remove entire binder.

Examples

```
unbind_packages(Package = c("a","b"), binder = "alphabets")
unbind_packages(binder = 'alphabets')
```

---

uninstall_binders	*Uninstall Binders*

Description

Function to uninstall the packages in the binder(s).

Usage

```
uninstall_binders(binders)
```

Arguments

binders	The binder(s) to uninstall

Examples

```
uninstall_binders("MLM")
```

---

view_binders   *View Binders*

Description

Function to see the binders of packages available and a summary for each.

Usage

```
view_binders()
```

Arguments

compartment	character vector, the compartment to view the binders in. Defaults to "all". - "all" to view all the binders - "master" to view binders that came with the package - "user" to view binders created by the user
search	character string, regex style search string for binders with matches to words in the search string. Deafults to NULL in which case all the binders are shown.

Examples

```
view_binders(compartment="master") ## to view all the binders in the master list
view_binders(compartment="master",binders="Machine Learning") ## to view a summary of just the Machine Learnin
```

Index