

Package ‘DataEditR’

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Title An Interactive Editor for Viewing, Entering, Filtering & Editing Data

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Description An interactive editor built on 'rhandsontable' to allow the interactive viewing, entering, filtering and editing of data in R
<<https://dillonhammill.github.io/DataEditR/>>.

URL <https://github.com/DillonHammill/DataEditR>

BugReports <https://github.com/DillonHammill/DataEditR/issues>

Depends R(>= 3.5.0)

Imports shiny (>= 1.5.0), shinyBS, shinyjs, bslib, rhandsontable (>= 0.3.8), rstudioapi, htmltools, miniUI, utils

License GPL-2

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dataEdit	<i>Shiny module for data editing</i>
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Description

Shiny module for data editing

Usage

```
dataEditUI(id)

dataEditServer(
  id,
  data = reactive(NULL),
  col_bind = NULL,
  col_edit = TRUE,
  col_options = NULL,
  col_stretch = FALSE,
  col_names = TRUE,
  col_readonly = NULL,
  col_factor = FALSE,
  row_bind = NULL,
  row_edit = TRUE,
  row_index = reactive(NULL),
  quiet = FALSE,
  read_fun = "read.csv",
  read_args = NULL,
  ...
)
```

Arguments

id	unique identifier for the module to prevent namespace clashes when making multiple calls to this shiny module.
data	a reactive expression containing an array (e.g. data.frame, matrix or data.table) or a vector indicating the dimensions of the array (e.g. c(10,10)) or column names to construct a new template for editing. If no data is supplied a template with 10 rows and columns will be generated for editing.
col_bind	additional columns to add to the data prior to loading into editor, can be either an array containing the new data, a vector containing the new column names for empty columns or a named list containing a vector for each new column.

col_edit	logical indicating whether columns can be added or removed, set to TRUE by default.
col_options	a list named with valid columns names and either <code>c(TRUE, FALSE)</code> for checkboxes, a vector of options for dropdowns, "date" for date input or "password" for password input.
col_stretch	logical indicating whether columns should be stretched to fill the full width of the display, set to FALSE by default.
col_names	logical indicating whether column names can be edited or a vector of column names that cannot be edited, set to TRUE by default to allow editing of column names.
col_readonly	names of columns that cannot be edited. Users will be able to edit values but these will be reverted to the original values. Column names for these column cannot be edited either.
col_factor	logical indicating whether character columns should be converted to factors prior to returning the edited data, set to FALSE by default.
row_bind	additional rows to add to the data prior to loading into editor, can be either an array containing the new data, a vector containing the new row names for empty rows or a named list containing a vector for each new column.
row_edit	logical indicating whether rows can be added or removed, set to TRUE by default.
row_index	indicates the starting index for new rows when the data supplied to <code>DataEdit()</code> is a subset of a larger dataset, i.e. <code>row_index</code> indicates the number of rows present in the parental dataset.
quiet	logical to suppress warnings when using <code>col_options</code> .
read_fun	name of the function to use to read in the data when a file is selected, set to <code>read.csv</code> by default.
read_args	a named list of additional arguments to pass to <code>read_fun</code> when reading in files.
...	additional arguments passed to <code>rhandsontable</code> .

Value

reactive expression containing the edited data.

Author(s)

Dillon Hammill, <Dillon.Hammill@anu.edu.au>

Examples

```
if (interactive()) {
  ui <- fluidPage(
    dataInputUI("input-1"),
    dataOutputUI("output-1"),
    dataEditUI("edit-1")
  )
}
```

```
server <- function(input, output, session) {  
  data_to_edit <- dataInputServer("input-1")  
  data_edit <- dataEditServer("edit-1",  
    data = data_to_edit  
  )  
  dataOutputServer("output-1",  
    data = data_edit  
  )  
}  
  
shinyApp(ui, server)  
}
```

dataFilter

Shiny module for filtering data

Description

Shiny module for filtering data

Usage

```
dataFilterUI(id)
```

```
dataFilterServer(id, data = reactive(NULL), hide = FALSE, hover_text = NULL)
```

Arguments

id	unique identifier for the module to prevent namespace clashes when making multiple calls to this shiny module.
data	an array wrapped in reactive() containing the data to be filtered.
hide	logical indicating whether the data filtering user interface should be hidden from the user, set to FALSE by default.
hover_text	text to display on download button when user hovers cursor over button, set to NULL by default to turn off hover text.

Value

a list of reactive objects containing the filtered data and indices for filtered rows.

Author(s)

Dillon Hammill, <Dillon.Hammill@anu.edu.au>

Examples

```
if (interactive()) {
  library(shiny)
  library(rhandsontable)
  library(shinyjs)

  ui <- fluidPage(
    useShinyjs(),
    dataInputUI("input1"),
    dataFilterUI("filter1"),
    rHandsontableOutput("data1")
  )

  server <- function(input,
                     output,
                     session) {
    data_input <- dataInputServer("input1")

    # list with slots data and rows (indices)
    data_filter <- dataFilterServer("filter1",
                                   data = data_input
    )

    output$data1 <- renderRHandsontable({
      if (!is.null(data_filter$data())) {
        rhandsontable(data_filter$data())
      }
    })

  }

  shinyApp(ui, server)
}
```

dataInput

Shiny module for data input

Description

Shiny module for data input

Usage

```
dataInputUI(id, cellWidths = c("50%", "48%"))

dataInputServer(
  id,
  data = NULL,
```

```

  read_fun = "read.csv",
  read_args = NULL,
  hide = FALSE,
  envir = parent.frame()
)

```

Arguments

<code>id</code>	unique identifier for the module to prevent namespace clashes when making multiple calls to this shiny module.
<code>cellWidths</code>	a vector of length 2 to control the relative widths of the <code>fileInput</code> and <code>textInput</code> , set to <code>c("50%", "50%")</code> by default.
<code>data</code>	can be either the name of a dataset or file as a character string (e.g. "mtcars" or "mtcars.csv") or a vector column names (e.g. <code>c("A", "B", "C")</code>) or template dimensions (e.g. <code>c(10,10)</code>).
<code>read_fun</code>	name of the function to use to read in the data when a file is selected, set to <code>read.csv</code> by default.
<code>read_args</code>	a named list of additional arguments to pass to <code>read_fun</code> when reading in files.
<code>hide</code>	logical indicating whether the data input user interface should be hidden from the user, set to <code>FALSE</code> by default.
<code>envir</code>	the environment in which to search for the supplied data, set to the <code>parent.frame()</code> of <code>dataInput</code> by default.

Author(s)

Dillon Hammill, <Dillon.Hammill@anu.edu.au>

Examples

```

if (interactive()) {
  library(shiny)
  library(rhandsontable)

  ui <- fluidPage(
    dataInputUI("input1"),
    rHandsontableOutput("data1")
  )

  server <- function(input,
                     output,
                     session) {
    data_input1 <- dataInputServer("input1")

    output$data1 <- renderRHandsontable({
      if (!is.null(data_input1())) {
        rhandsontable(data_input1())
      }
    })
  }
}

```

```
    shinyApp(ui, server)
  }
```

dataOutput

Shiny module for data output

Description

Shiny module for data output

Usage

```
dataOutputUI(id, icon = "download")
```

```
dataOutputServer(
  id,
  data = reactive(NULL),
  save_as = NULL,
  write_fun = "write.csv",
  write_args = NULL,
  hide = FALSE,
  hover_text = NULL
)
```

Arguments

<code>id</code>	unique identifier for the module to prevent namespace clashes when making multiple calls to this shiny module.
<code>icon</code>	supplied to <code>dataOutputUI</code> to control the appearance of the icon displayed on the download button, set to "download" by default.
<code>data</code>	an object of class <code>data.frame</code> wrapped in <code>reactive</code> to be saved to file.
<code>save_as</code>	name of the file to which the data should be saved, overrides input file path if supplied.
<code>write_fun</code>	name of the function to use when writing the data to file, set to "write.csv" by default.
<code>write_args</code>	a named list of additional arguments to pass to <code>write_fun</code> when reading in files.
<code>hide</code>	logical indicating whether the data input user interface should be hidden from the user, set to <code>FALSE</code> by default.
<code>hover_text</code>	text to display on download button when user hovers cursor over button, set to <code>NULL</code> by default to turn off hover text.

Author(s)

Dillon Hammill, <Dillon.Hammill@anu.edu.au>

Examples

```
if (interactive()) {
  library(shiny)
  library(rhandsontable)
  library(shinyjs)

  ui <- fluidPage(
    useShinyjs(),
    dataInputUI("input1"),
    dataOutputUI("output1"),
    rHandsontableOutput("data1")
  )

  server <- function(input,
                     output,
                     session) {
    data_input1 <- dataInputServer("input1")

    output$data1 <- renderRHandsontable({
      if (!is.null(data_input1())) {
        rhandsontable(data_input1())
      }
    })

    dataOutputServer("output1",
                    data = data_input1
                    )
  }

  shinyApp(ui, server)
}
```

dataSelect

Shiny module for selecting data

Description

Shiny module for selecting data

Usage

```
dataSelectUI(id)
```

```
dataSelectServer(id, data = reactive(NULL), hide = FALSE, hover_text = NULL)
```

Arguments

id unique identifier for the module to prevent namespace clashes when making multiple calls to this shiny module.

data	an array wrapped in reactive() containing the data to be filtered.
hide	logical indicating whether the data selection user interface should be hidden from the user, set to FALSE by default.
hover_text	text to display on download button when user hovers cursor over button, set to NULL by default to turn off hover text.

Value

a list of reactive objects containing the filtered data and indices for selected columns.

Author(s)

Dillon Hammill, <Dillon.Hammill@anu.edu.au>

Examples

```
if (interactive()) {
  library(shiny)
  library(rhandsontable)
  library(shinyjs)

  ui <- fluidPage(
    useShinyjs(),
    dataInputUI("input1"),
    dataSelectUI("select1"),
    rHandsontableOutput("data1")
  )

  server <- function(input,
                     output,
                     session) {
    data_input <- dataInputServer("input1")

    data_select <- dataSelectServer("select1",
                                   data = data_input)
  )

  output$data1 <- renderRHandsontable({
    if (!is.null(data_select$data())) {
      rhandsontable(data_select$data())
    }
  })
}

shinyApp(ui, server)
}
```

`dataSync`*A shiny module to synchronise datasets*

Description

The purpose of this module is to merge changes made to a subset of the data with the master copy of the data.

Usage

```
dataSyncUI(id)

dataSyncServer(
  id,
  data = reactive(NULL),
  data_subset = reactive(NULL),
  rows = reactive(NULL),
  columns = reactive(NULL),
  hide = FALSE,
  hover_text = NULL
)
```

Arguments

<code>id</code>	unique identifier for the module to prevent namespace clashes when making multiple calls to this shiny module.
<code>data</code>	master copy of the data.
<code>data_subset</code>	subset of data with altered entries.
<code>rows</code>	the row indices of <code>data_subset</code> within data.
<code>columns</code>	the column indices of <code>data_subset</code> within data.
<code>hide</code>	logical indicating whether the data synchronisation user interface should be hidden from the user, set to <code>FALSE</code> by default.
<code>hover_text</code>	text to display on download button when user hovers cursor over button, set to <code>NULL</code> by default to turn off hover text.

Author(s)

Dillon Hammill, <Dillon.Hammill@anu.edu.au>

Examples

```
if(interactive()){
  library(shiny)
  library(rhandsontable)
  library(shinyjs)
```

```
ui <- fluidPage(  
  useShinyjs(),  
  dataInputUI("input1"),  
  dataFilterUI("filter1"),  
  dataSyncUI("sync1"),  
  dataEditUI("edit1")  
)  
  
server <- function(input,  
                   output,  
                   session) {  
  
  values <- reactiveValues(  
    data = NULL,  
    data_subset = NULL  
  )  
  
  data_input <- dataInputServer("input1")  
  
  data_edit <- dataEditServer(  
    "edit1",  
    data = data_input  
  )  
  
  data_sync <- dataSyncServer(  
    "sync1",  
    data = data_input,  
    data_subset = data_edit,  
    rows = NULL,  
    columns = NULL  
  )  
  
}  
shinyApp(ui, server)  
}
```

data_edit

An interactive editor for viewing, entering and editing data

Description

codedata_edit is a shiny application built on rhandsontable that is designed to make it easy to interactively view, enter or edit data without any coding. data_edit is also a wrapper for any reading or writing function to make it easy to interactively update data saved to file.

Usage

```
data_edit(  
  x = NULL,
```

```

col_bind = NULL,
col_edit = TRUE,
col_options = NULL,
col_stretch = FALSE,
col_factor = FALSE,
col_names = TRUE,
col_readonly = NULL,
row_bind = NULL,
row_edit = TRUE,
save_as = NULL,
title = NULL,
logo = NULL,
logo_size = 30,
logo_side = "left",
viewer = "dialog",
viewer_height = 800,
viewer_width = 1200,
theme = "yeti",
read_fun = "read.csv",
read_args = NULL,
write_fun = "write.csv",
write_args = NULL,
quiet = FALSE,
hide = FALSE,
code = FALSE,
...
)

```

Arguments

x	a matrix, data.frame, data.table or the name of a csv file to edit. Tibbles are also supported but will be coerced to data.frames. An empty table can be created by specifying the dimensions in a vector of the form <code>c(nrow, ncol)</code> or the names of the columns to include in the template.
col_bind	additional columns to add to the data prior to loading into editor, can be either an array containing the new data, a vector containing the new column names for empty columns or a named list containing a vector for each new column.
col_edit	logical indicating whether columns can be added or removed, set to TRUE by default.
col_options	named list containing the options for columns that use dropdown menus, dates, checkboxes or passwords.
col_stretch	logical indicating whether columns should be stretched to fill the full width of the display, set to FALSE by default.
col_factor	logical indicating whether character columns should be converted to factors prior to returning the edited data, set to FALSE by default.
col_names	logical indicating whether column names can be edited or a vector of column names that cannot be edited, set to TRUE by default to allow editing of column names.

col_readonly	names of columns that cannot be edited. Users will be able to edit values but these will be reverted to the original values. Column names for these column cannot be edited either.
row_bind	additional rows to add to the data prior to loading into editor, can be either an array containing the new data, a vector containing the new row names for empty rows or a named list containing a vector for each new column.
row_edit	logical indicating whether rows can be added or removed, set to TRUE by default.
save_as	name of a csv file to which the edited data should be saved.
title	optional title to include above the data editor.
logo	optional package logo to include in title above the data editor, must be supplied as path to logo png.
logo_size	width of the logo in pixels, set to 30 pixels by default.
logo_side	can be either "left" or "right" to determine the position of the logo relative to the title, set to "left" by default.
viewer	can be either "dialog", "browser" or "pane" to open the application in a dialog box, browser or RStudio viewer pane. First letter abbreviations are allowed, set to "dialog" by default.
viewer_height	numeric to control the height of the viewer in pixels when viewer is set to "dialog", set 800 by default.
viewer_width	numeric to control the width of the viewer in pixels when viewer is set to "dialog", set to 1200 by default.
theme	valid shinytheme name, set to "yeti" by default.
read_fun	name of the function to use to read in the data when x is the name of a file, set to read.csv by default.
read_args	a named list of additional arguments to pass to read_fun.
write_fun	name of the function to use to write the edited version of x to a file, set to write.csv by default. Only requirement is that the first argument accepts the edited data and the second argument accepts the file name supplied to save_as.
write_args	a named list of additional arguments to pass to write_fun.
quiet	logical indicating whether messages should be suppressed, set to FALSE by default.
hide	logical indicating whether the dataInput and dataOutput modules should be visible to the user within the application. If hide = FALSE and save_as is specified, the edited data will be written to file after the application is closed.
code	logical indicating whether the code required to generate the edited data should be printed to the console, set to FALSE by default. Alternatively, users can supply the name of an R script to create and store this code.
...	not in use.

Value

the edited data as a matrix or data.frame.

Author(s)

Dillon Hammill, <Dillon.Hammill@anu.edu.au>

Examples

```
if(interactive()) {  
  data_edit(mtcars)  
}
```

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