Package 'esquisse'

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Type Package

Title Explore and Visualize Your Data Interactively

Version 1.0.2

Description A 'shiny' gadget to create 'ggplot2' figures interactively with drag-and-drop to map your variables to different aesthetics.
You can quickly visualize your data accordingly to their type, export in various formats, and retrieve the code to reproduce the plot.

URL https://github.com/dreamRs/esquisse

BugReports https://github.com/dreamRs/esquisse/issues

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Encoding UTF-8

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Imports datamods, rstudioapi, shiny (>= 1.1.0), htmltools, jsonlite, shinyWidgets (>= 0.6.0), ggplot2 (>= 3.0.0), scales, rlang (>= 0.3.1), grDevices

Suggests officer, rvg, rio, testthat (>= 2.1.0), knitr, rmarkdown, ggthemes, hrbrthemes

VignetteBuilder knitr

NeedsCompilation no

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R **topics documented:**

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build_aes	*Build aesthetics to use in a plot*

Description

Build aesthetics to use in a plot

Usage

```
build_aes(data, ..., .list = NULL, geom = NULL)
```

Arguments

data	Data to use in the plot.
...	Named list of aesthetics.
.list	Alternative to ... to use a preexisting named list.
geom	Geom to use, according to the geom aesthetics may vary.

Value

An expression

Examples

```
# Classic
build_aes(iris, x = "Sepal.Width")
build_aes(iris, x = "Sepal.Width", y = "Sepal.Width")

# Explicit geom : no change
build_aes(iris, x = "Species", geom = "bar")

# Little trick if data is count data
df <- data.frame(
  LET = c("A", "B"),
  VAL = c(4, 7)
)
build_aes(df, x = "LET", y = "VAL", geom = "bar")

# e.g. :
library(ggplot2)
ggplot(df) +
  build_aes(df, x = "LET", y = "VAL", geom = "bar") +
  geom_bar()
```

---

dragulaInput   *Drag And Drop Input Widget*

Description

Drag And Drop Input Widget

Usage

```
dragulaInput(
  inputId,
  label = NULL,
  sourceLabel,
  targetsLabels,
  targetsIds = NULL,
  choices = NULL,
  choiceNames = NULL,
  choiceValues = NULL,
  selected = NULL,
  status = "primary",
  replace = FALSE,
  copySource = TRUE,
  badge = TRUE,
  ncolSource = "auto",
  ncolGrid = NULL,
  dragulaOpts = list(),
  boxStyle = NULL,
```

```
    width = NULL,
    height = "100px"
)
```

Arguments

inputId	The input slot that will be used to access the value.
label	Display label for the control, or NULL for no label.
sourceLabel	Label display in the source box
targetsLabels	Labels for each target element.
targetsIds	Ids for retrieving values server-side, if NULL, the default, targetsLabels are used after removing all not-alphanumeric characters.
choices	List of values to select from (if elements of the list are named then that name rather than the value is displayed to the user). If this argument is provided, then choiceNames and choiceValues must not be provided, and vice-versa. The values should be strings; other types (such as logicals and numbers) will be coerced to strings.
choiceNames, choiceValues	
	List of names and values, respectively, that are displayed to the user in the app and correspond to the each choice (for this reason, choiceNames and choiceValues must have the same length). If either of these arguments is provided, then the other must be provided and choices must not be provided. The advantage of using both of these over a named list for choices is that choiceNames allows any type of UI object to be passed through (tag objects, icons, HTML code, ...), instead of just simple text.
selected	Default selected values. Must be a list with targetsIds as names.
status	If choices are displayed into a Bootstrap label, you can use Bootstrap status to color them, or NULL.
replace	When a choice is dragged in a target container already containing a choice, does the later be replaced by the new one ?
copySource	When replace = TRUE, does elements in source must be copied or moved ?
badge	Displays choices inside a Bootstrap badge. Use FALSE if you want to pass custom appearance with choiceNames.
ncolSource	Number of columns occupied by the source, default is "auto", meaning full row.
ncolGrid	Number of columns used to place source and targets boxes, see examples.
dragulaOpts	Options passed to dragula JavaScript library.
boxStyle	CSS style string to customize source and target container.
width	Width of the input.
height	Height of each boxes, the total input height is this parameter X 2.

Value

a UI definition

Note

The output server-side is a list with two slots: source and targets.

See Also

updateDragulaInput to update choices server-side.

Examples

```
library(shiny)
library(esquisse)

ui <- fluidPage(
  tags$h2("Demo dragulaInput"),
  tags$br(),
  fluidRow(
    column(
      width = 6,

      dragulaInput(
        inputId = "dad1",
        label = "Default:",
        sourceLabel = "Source",
        targetsLabels = c("Target 1", "Target 2"),
        choices = month.abb,
        width = "100%"
      ),
      verbatimTextOutput(outputId = "result1"),

      tags$br(),

      dragulaInput(
        inputId = "dad3",
        label = "On same row:",
        sourceLabel = "Source",
        targetsLabels = c("Target 1", "Target 2"),
        choices = month.abb,
        width = "100%",
        ncolSource = 1,
        ncolGrid = 3
      ),
      verbatimTextOutput(outputId = "result3")
    ),

    column(
      width = 6,
      dragulaInput(
        inputId = "dad2",
        label = "Two rows:",
        sourceLabel = "Source",
        targetsLabels = c("x", "y", "color", "fill", "size", "facet"),
        choices = names(mtcars),
```

```
        width = "100%",
        ncolGrid = 3
      ),
      verbatimTextOutput(outputId = "result2"),

      tags$br(),

      dragulaInput(
        inputId = "dad4",
        label = "Two rows not filled:",
        sourceLabel = "Source",
        targetsLabels = c("x", "y", "color", "fill", "size"),
        choices = names(mtcars),
        width = "100%",
        ncolGrid = 3
      ),
      verbatimTextOutput(outputId = "result4")
    )
  )
)


server <- function(input, output, session) {

  output$result1 <- renderPrint(str(input$dad1))

  output$result2 <- renderPrint(str(input$dad2))

  output$result3 <- renderPrint(str(input$dad3))

  output$result4 <- renderPrint(str(input$dad4))

}

if (interactive())
  shinyApp(ui = ui, server = server)
```

---

dropInput   *Dropdown Input*

Description

A dropdown menu for selecting a value.

Usage

```
dropInput(
  inputId,
```

```
    choicesNames,
    choicesValues,
    selected = NULL,
    dropUp = FALSE,
    dropWidth = NULL,
    dropMaxHeight = NULL,
    dropPreScrollable = FALSE,
    btnClass = "btn-link",
    width = NULL
)
```

Arguments

inputId	The `input` slot that will be used to access the value.
choicesNames	A `tagList` of HTML tags to show in the dropdown menu.
choicesValues	Vector corresponding to `choicesNames` for retrieving values server-side.
selected	The initial selected value, must be an element of `choicesValues`, default to the first item of `choicesValues`.
dropUp	Open the menu above the button rather than below.
dropWidth	Width of the dropdown menu.
dropMaxHeight	Maximal height for the menu.
dropPreScrollable	
	Force scroll bar to appear in the menu.
btnClass	Class for buttons in dropdown menu, default is `"btn-link"`, you can use for example `"btn-default"` to display regular buttons.
width	The width of the input.

See Also

[updateDropInput](#)

Examples

```
if (interactive()) {

  library(shiny)
  library(esquisse)

  ui <- fluidPage(
    tags$h2("Drop Input"),
    dropInput(
      inputId = "mydrop",
      choicesNames = tagList(
        list(icon("home"), style = "width: 100px;"),
        list(icon("flash"), style = "width: 100px;"),
        list(icon("cogs"), style = "width: 100px;"),
        list(icon("fire"), style = "width: 100px;"),
        list(icon("users"), style = "width: 100px;"),
```

```
        list(icon("info"), style = "width: 100px;")
      ),
      choicesValues = c("home", "flash", "cogs",
                        "fire", "users", "info"),
      dropWidth = "220px"
    ),
    verbatimTextOutput(outputId = "res")
  )

  server <- function(input, output, session) {
    output$res <- renderPrint({
      input$mydrop
    })
  }

  shinyApp(ui, server)

}
```

---

esquisse-deprecated   *Deprecated functions*

Description

Deprecated functions

Note

The following functions are deprecated and will be removed in next release:

- `esquisserUI` / `esquisserServer`: replaced by `esquisse_ui` / `esquisse_server`
- `filterDF_UI` / `filterDF`: moved to package datamods
- `chooseDataUI` / `chooseDataServer`: moved to package datamods
- `coerceUI` / `coerceServer`: moved to package datamods

---

esquisse-module   *Esquisse module*

Description

Use esquisse as a module in a Shiny application.

Usage

```
esquisse_ui(
  id,
  header = TRUE,
  container = esquisseContainer(),
  controls = c("labs", "parameters", "appearance", "filters", "code"),
  insert_code = FALSE
)

esquisse_server(
  id,
  data_rv = NULL,
  default_aes = c("fill", "color", "size", "group", "facet"),
  import_from = c("env", "file", "copypaste", "googlesheets")
)

esquisseContainer(width = "100%", height = "700px", fixed = FALSE)
```

Arguments

id	Module ID.
header	Logical. Display or not esquisse header.
container	Container in which display the addin, default is to use esquisseContainer, see examples. Use NULL for no container (behavior in versions <= 0.2.1). Must be a function.
controls	Controls menu to be displayed. Use NULL to hide all menus.
insert_code	Logical, Display or not a button to insert the ggplot code in the current user script (work only in RStudio).
data_rv	A reactiveValues with at least a slot data containing a data.frame to use in the module. And a slot name corresponding to the name of the data.frame.
default_aes	Default aesthetics to be used, can be a character vector or reactive function returning one.
import_from	From where to import data, argument passed to [datamods::import_ui]().
width, height	The width and height of the container, e.g. "400px", or "100%"; see [validateCssUnit]().
fixed	Use a fixed container, e.g. to use use esquisse full page. If TRUE, width and height are ignored. Default to FALSE. It's possible to use a vector of CSS unit of length 4 to specify the margins (top, right, bottom, left).

Value

A reactiveValues with 3 slots :

- **code_plot** : code to generate plot.
- **code_filters** : a list of length two with code to reproduce filters.
- **data** : data.frame used in plot (with filters applied).

Examples

```
### Part of a Shiny app ###

library(shiny)
library(esquisse)

ui <- fluidPage(
  tags$h1("Use esquisse as a Shiny module"),

  radioButtons(
    inputId = "data",
    label = "Data to use:",
    choices = c("iris", "mtcars"),
    inline = TRUE
  ),
  checkboxGroupInput(
    inputId = "aes",
    label = "Aesthetics to use:",
    choices = c(
      "fill", "color", "size", "shape",
      "weight", "group", "facet", "facet_row", "facet_col"
    ),
    selected = c("fill", "color", "size", "facet"),
    inline = TRUE
  ),
  esquisse_ui(
    id = "esquisse",
    header = FALSE, # dont display gadget title
    container = esquisseContainer(height = "700px")
  )
)

server <- function(input, output, session) {

  data_rv <- reactiveValues(data = iris, name = "iris")

  observeEvent(input$data, {
    if (input$data == "iris") {
      data_rv$data <- iris
      data_rv$name <- "iris"
    } else {
      data_rv$data <- mtcars
      data_rv$name <- "mtcars"
    }
  })

  esquisse_server(
    id = "esquisse",
    data_rv = data_rv,
    default_aes = reactive(input$aes)
  )
```

```
}

if (interactive())
  shinyApp(ui, server)


### Whole Shiny app ###

library(shiny)
library(esquisse)


# Load some datasets in app environment
my_data <- data.frame(
  var1 = rnorm(100),
  var2 = sample(letters[1:5], 100, TRUE)
)


ui <- fluidPage(
  esquisse_ui(
    id = "esquisse",
    container = esquisseContainer(fixed = TRUE)
  )
)

server <- function(input, output, session) {

  esquisse_server(id = "esquisse")

}

if (interactive())
  shinyApp(ui, server)



## You can also use a vector of margins for the fixed argument,
# useful if you have a navbar for example

library(shiny)
library(esquisse)
library(datamods)

ui <- navbarPage(
  title = "My navbar app",
  tabPanel(
    title = "esquisse",
    esquisse_ui(
      id = "esquisse",
      header = FALSE,
      container = esquisseContainer(
```

```
        fixed = c(55, 0, 0, 0)
      )
    )
  )
)

server <- function(input, output, session) {

  # lauch import data modal
  import_modal(
    id = "import-data",
    from = c("env", "file", "copypaste"),
    title = "Import data"
  )
  data_imported_r <- datamods::import_server("import-data")

  data_rv <- reactiveValues(data = data.frame())
  observeEvent(data_imported_r$data(), {
    data_rv$data <- data_imported_r$data()
    data_rv$name <- data_imported_r$name()
  })

  esquisse_server(id = "esquisse", data_rv = data_rv)

}

if (interactive())
  shinyApp(ui, server)
```

---

esquisser   *An add-in to easily create plots with ggplot2*

Description

Select data to be used and map variables to aesthetics to produce a chart, customize common elements and get code to reproduce the chart.

Usage

```
esquisser(
  data = NULL,
  controls = c("labs", "parameters", "appearance", "filters", "code"),
  viewer = getOption(x = "esquisse.viewer", default = "dialog")
)
```

Arguments

data   a data.frame, you can pass a data.frame explicitly to the function, otherwise
                you'll have to choose one in global environment.

controls	Controls menu to be displayed. Use NULL to hide all menus.
viewer	Where to display the gadget: "dialog", "pane" or "browser" (see viewer).

Value

NULL. You can view code used to produce the chart, copy it or insert it in current script.

Examples

```
if (interactive()) {
# Launch with :
esquisser(iris)
# If in RStudio it will be launched by default in dialog window
# If not, it will be launched in browser

# Launch esquisse in browser :
esquisser(iris, viewer = "browser")

# You can set this option in .Rprofile :
options("esquisse.viewer" = "viewer")
# or
options("esquisse.viewer" = "browser")

# esquisse use shiny::runApp
# see ?shiny::runApp to see options
# available, example to use custom port:

options("shiny.port" = 8080)
esquisser(iris, viewer = "browser")

}
```

---

esquisserServer   *Esquisse Shiny module*

Description

DEPRECATED, see esquisse-module.

Usage

```
esquisserServer(
  input,
  output,
  session,
  data = NULL,
  dataModule = c("GlobalEnv", "ImportFile"),
  sizeDataModule = "m"
)
```

```
esquisserUI(
  id,
  header = TRUE,
  container = esquisseContainer(),
  choose_data = TRUE,
  insert_code = FALSE,
  disable_filters = FALSE
)
```

Arguments

input, output, session

> Standards `shiny` server arguments.

data   A `reactiveValues` with at least a slot data containing a `data.frame` to use in the module. And a slot name corresponding to the name of the `data.frame`.

dataModule   Data module to use, choose between "GlobalEnv" or "ImportFile".

sizeDataModule Size for the modal window for selecting data.

id   Module's id.

header   Logical. Display or not `esquisse` header.

container   Container in which display the addin, default is to use `esquisseContainer`, see examples. Use NULL for no container (behavior in versions <= 0.2.1). Must be a `function`.

choose_data   Logical. Display or not the button to choose data.

insert_code   Logical, Display or not a button to insert the ggplot code in the current user script (work only in RStudio).

disable_filters

> Logical. Disable the menu allowing to filter data used.

Value

A `reactiveValues` with 3 slots :

- **code_plot** : code to generate plot.
- **code_filters** : a list of length two with code to reproduce filters.
- **data** : `data.frame` used in plot (with filters applied).

Note

For the module to display correctly, it is necessary to place it in a container with a fixed height. Since version >= 0.2.2, the container is added by default.

---

ggcall *Generate code to create a* ggplot2

Description

Generate code to create a ggplot2

Usage

```
ggcall(
  data = NULL,
  mapping = NULL,
  geom = NULL,
  geom_args = list(),
  scales = NULL,
  scales_args = list(),
  coord = NULL,
  labs = list(),
  theme = NULL,
  theme_args = list(),
  facet = NULL,
  facet_row = NULL,
  facet_col = NULL,
  facet_args = list(),
  xlim = NULL,
  ylim = NULL
)
```

Arguments

data	Character. Name of the data.frame.
mapping	List. Named list of aesthetics.
geom	Character. Name of the geom to use (with or without "geom_").
geom_args	List. Arguments to use in the geom.
scales	Character vector. Scale(s) to use (with or without "scale_").
scales_args	List. Arguments to use in scale(s), if scales is length > 1, must be a named list with scales names.
coord	Character. Coordinates to use (with or without "coord_").
labs	List. Named list of labels to use for title, subtitle, x & y axis, legends.
theme	Character. Name of the theme to use (with or without "theme_").
theme_args	Named list. Arguments for theme.
facet	Character vector. Names of variables to use in facet_wrap.
facet_row	Character vector. Names of row variables to use in facet_grid.

facet_col	Character vector. Names of col variables to use in `facet_grid`.
facet_args	Named list. Arguments for `facet_wrap`.
xlim	A vector of length 2 representing limits on x-axis.
ylim	A vector of length 2 representing limits on y-axis.

Value

a `call` that can be evaluated with `eval`.

Examples

```
# Default:
ggcall()

# With data and aes
ggcall("mtcars", list(x = "mpg", y = "wt"))

# Evaluate the call
library(ggplot2)
eval(ggcall("mtcars", list(x = "mpg", y = "wt")))


# With a geom:
ggcall(
  data = "mtcars",
  mapping = list(x = "mpg", y = "wt"),
  geom = "point"
)

# With options
ggcall(
  data = "mtcars",
  mapping = list(x = "hp", y = "cyl", fill = "color"),
  geom = "bar",
  coord = "flip",
  labs = list(title = "My title"),
  theme = "minimal",
  facet = c("gear", "carb"),
  theme_args = list(legend.position = "bottom")
)

# Theme
ggcall(
  "mtcars", list(x = "mpg", y = "wt"),
  theme = "theme_minimal",
  theme_args = list(
    panel.ontop = TRUE,
    legend.title = rlang::expr(element_text(face = "bold"))
  )
)
```

```
# Theme from other package than ggplot2
ggcall(
  "mtcars", list(x = "mpg", y = "wt"),
  theme = "ggthemes::theme_economist"
)


# One scale
ggcall(
  data = "mtcars",
  mapping = list(x = "mpg", y = "wt", color = "qsec"),
  geom = "point",
  scales = "color_distiller",
  scales_args = list(palette = "Blues")
)

# Two scales
ggcall(
  data = "mtcars",
  mapping = list(x = "mpg", y = "wt", color = "qsec", size = "qsec"),
  geom = "point",
  scales = c("color_distiller", "size_continuous"),
  scales_args = list(
    color_distiller = list(palette = "Greens"),
    size_continuous = list(range = c(1, 20))
  )
)
```

---

ggplot-output   *Render* ggplot *module*

Description

Display a plot on the client and allow to download it.

Usage

```
ggplot_output(
  id,
  width = "100%",
  height = "400px",
  downloads = downloads_labels(),
  ...
)

downloads_labels(
  label = icon("download"),
  png = tagList(icon("file-image-o"), "PNG"),
  pdf = tagList(icon("file-pdf-o"), "PDF"),
```

```
  svg = tagList(icon("chrome"), "SVG"),
  jpeg = tagList(icon("file-image-o"), "JPEG"),
  pptx = tagList(icon("file-powerpoint-o"), "PPTX"),
  more = tagList(icon("gear"), "More options")
)

render_ggplot(
  id,
  expr,
  ...,
  env = parent.frame(),
  quoted = FALSE,
  filename = "export-ggplot"
)
```

Arguments

`id`	Module ID.
`width`	Width of the plot.
`height`	Height of the plot.
`downloads`	Labels for export options, use `downloads_labels`.
`...`	Parameters passed to [`plotOutput`](#) or [`renderPlot`](#).
`label`	Main label for export button
`png, pdf, svg, jpeg, pptx`	
	Labels to display in export menu, use `NULL` to disable specific format.
`more`	Label for "more" button, allowing to launch export modal.
`expr`	An expression that generates a `ggplot` object.
`env`	The environment in which to evaluate expression.
`quoted`	Is expr a quoted expression (with `quote()`)? This is useful if you want to save an expression in a variable.
`filename`	A string of the filename to export WITHOUT extension, it will be added according to type of export.

Value

Server-side, a `reactiveValues` with the plot.

Examples

```
library(shiny)
library(ggplot2)
library(esquisse)


ui <- fluidPage(
```

```
      tags$h2("ggplot output"),
      selectInput("var", "Variable:", names(economics)[-1]),
      ggplot_output("MYID", width = "600px")
  )

  server <- function(input, output, session) {

    render_ggplot("MYID", {
      ggplot(economics) +
        geom_line(aes(date, !!sym(input$var))) +
        theme_minimal() +
        labs(
          title = "A cool chart made with ggplot2",
          subtitle = "that you can export in various format"
        )
    })
  }

  if (interactive())
    shinyApp(ui, server)
```

---

ggplot_to_ppt   *Utility to export ggplot objects to PowerPoint*

Description

You can use the RStudio addin to interactively select ggplot objects, or directly pass their names to
the function.

Usage

```
ggplot_to_ppt(gg = NULL)
```

Arguments

gg   character. Name(s) of ggplot object(s), if NULL, launch the Shiny gadget.

Value

Path to the temporary PowerPoint file.

Examples

```
# Shiny gadget
if (interactive()) {

ggplot_to_ppt()
```

```
# Or with an object's name
library(ggplot2)
p <- ggplot(iris) +
  geom_point(aes(Sepal.Length, Sepal.Width))

ggplot_to_ppt("p")

}
```

---

input-colors   *Picker input to select color(s) or palette*

Description

Select menu to view and choose a color or a palette of colors.

Usage

```
colorPicker(
  inputId,
  label,
  choices,
  selected = NULL,
  textColor = "#000",
  plainColor = FALSE,
  multiple = FALSE,
  pickerOpts = list(),
  width = NULL
)

updateColorPicker(
  session = getDefaultReactiveDomain(),
  inputId,
  choices,
  textColor = "#000",
  plainColor = FALSE,
  multiple = FALSE
)

palettePicker(
  inputId,
  label,
  choices,
  selected = NULL,
  textColor = "#000",
  plainColor = FALSE,
```

```
    pickerOpts = list(),
    width = NULL
)

updatePalettePicker(
    session = getDefaultReactiveDomain(),
    inputId,
    choices,
    selected = NULL,
    textColor = "#000",
    plainColor = FALSE
)
```

Arguments

`inputId`	The `input` slot that will be used to access the value.
`label`	Display label for the control, or `NULL` for no label.
`choices`	List of values to select from. Values must be valid Hex colors. If elements of the list are named then that name rather than the value is displayed to the user.
`selected`	The initially selected value (or multiple values if `multiple = TRUE`). If not specified then defaults to the first value for single-select lists and no values for multiple select lists.
`textColor`	Color of the text displayed above colors, can be a vector of the same length as choices.
`plainColor`	Color the full space of the choice menu.
`multiple`	Is selection of multiple items allowed?
`pickerOpts`	Options for [`pickerInput`](#).
`width`	The width of the input : `'auto'`, `'fit'`, `'100px'`, `'75%'`.
`session`	Shiny session.

Value

A select control that can be added to a UI definition.

Examples

```
# colorPicker ---------------------------------------------------------

library(shiny)
library(esquisse)
library(scales)


ui <- fluidPage(
  tags$h2("colorPicker examples"),
  fluidRow(
```

```
column(
  width = 3,
  colorPicker(
    inputId = "col1",
    label = "With a vector of colors:",
    choices = brewer_pal(palette = "Dark2")(8)
  ),
  verbatimTextOutput("res1"),
  colorPicker(
    inputId = "col5",
    label = "Update colors:",
    choices = brewer_pal(palette = "Blues", direction = -1)(8),
    textColor = "#FFF"
  ),
  verbatimTextOutput("res5"),
  radioButtons(
    "update", "Colors", c("Blues", "Greens", "Reds"),
    inline = TRUE
  )
),
column(
  width = 3,
  colorPicker(
    inputId = "col2",
    label = "Change text color:",
    choices = brewer_pal(palette = "Blues")(8),
    textColor = c("black", "black", "black", "white",
                  "white", "white", "white", "white")
  ),
  verbatimTextOutput("res2")
),
column(
  width = 3,
  colorPicker(
    inputId = "col3",
    label = "With a list of vector of colors:",
    choices = list(
      "Blues" = brewer_pal(palette = "Blues")(8),
      "Reds" = brewer_pal(palette = "Reds")(8),
      "Greens" = brewer_pal(palette = "Greens")(8)
    )
  ),
  verbatimTextOutput("res3")
),
column(
  width = 3,
  colorPicker(
    inputId = "col4",
    label = "Plain color & multiple choices:",
    choices = brewer_pal(palette = "Paired")(8),
    plainColor = TRUE,
    multiple = TRUE,
    pickerOpts = list(`selected-text-format`= "count > 3")
```

```
      ),
      verbatimTextOutput("res4")
    )
  )
)

server <- function(input, output, session) {

  output$res1 <- renderPrint(input$col1)
  output$res2 <- renderPrint(input$col2)
  output$res3 <- renderPrint(input$col3)
  output$res4 <- renderPrint(input$col4)
  output$res5 <- renderPrint(input$col5)

  observeEvent(input$update, {
    updateColorPicker(
      inputId = "col5",
      choices = brewer_pal(palette = input$update, direction = -1)(8),
      textColor = "#FFF"
    )
  })

}

if (interactive()) {
  shinyApp(ui, server)
}

# palettePicker ------------------------------------------------------

library(shiny)
library(esquisse)
library(scales)

ui <- fluidPage(
  tags$h2("pickerColor examples"),

  fluidRow(
    column(
      width = 4,
      palettePicker(
        inputId = "pal1",
        label = "Select a palette:",
        choices = list(
          "Blues" = brewer_pal(palette = "Blues")(8),
          "Reds" = brewer_pal(palette = "Reds")(8)
        )
      ),
      verbatimTextOutput("res1"),
      palettePicker(
        inputId = "pal4",
        label = "Update palette:",
        choices = list(
```

```r
        "Blues" = brewer_pal(palette = "Blues")(8),
        "Reds" = brewer_pal(palette = "Reds")(8)
      )
    ),
    verbatimTextOutput("res4"),
    radioButtons(
      "update", "Palettes:", c("default", "viridis", "brewer"),
      inline = TRUE
    )
  ),
  column(
    width = 4,
    palettePicker(
      inputId = "pal2",
      label = "With a list of palette:",
      choices = list(
        "Viridis" = list(
          "viridis" = viridis_pal(option = "viridis")(10),
          "magma" = viridis_pal(option = "magma")(10),
          "inferno" = viridis_pal(option = "inferno")(10),
          "plasma" = viridis_pal(option = "plasma")(10),
          "cividis" = viridis_pal(option = "cividis")(10)
        ),
        "Brewer" = list(
          "Blues" = brewer_pal(palette = "Blues")(8),
          "Reds" = brewer_pal(palette = "Reds")(8),
          "Paired" = brewer_pal(palette = "Paired")(8),
          "Set1" = brewer_pal(palette = "Set1")(8)
        )
      ),
      textColor = c(
        rep("white", 5), rep("black", 4)
      )
    ),
    verbatimTextOutput("res2")
  ),
  column(
    width = 4,
    palettePicker(
      inputId = "pal3",
      label = "With plain colors:",
      choices = list(
        "BrBG" = brewer_pal(palette = "BrBG")(8),
        "PiYG" = brewer_pal(palette = "PiYG")(8),
        "PRGn" = brewer_pal(palette = "PRGn")(8),
        "PuOr" = brewer_pal(palette = "PuOr")(8),
        "RdBu" = brewer_pal(palette = "RdBu")(8),
        "RdGy" = brewer_pal(palette = "RdGy")(8),
        "RdYlBu" = brewer_pal(palette = "RdYlBu")(8),
        "RdYlGn" = brewer_pal(palette = "RdYlGn")(8),
        "Spectral" = brewer_pal(palette = "Spectral")(8)
      ),
      plainColor = TRUE,
```

```
              textColor = "white"
            ),
            verbatimTextOutput("res3")
          )
        )
      )

    server <- function(input, output, session) {

      output$res1 <- renderPrint(input$pal1)
      output$res2 <- renderPrint(input$pal2)
      output$res3 <- renderPrint(input$pal3)
      output$res4 <- renderPrint(input$pal4)

      observeEvent(input$update, {
        if (input$update == "default") {
          updatePalettePicker(
            inputId = "pal4",
            choices = list(
              "Blues" = brewer_pal(palette = "Blues")(8),
              "Reds" = brewer_pal(palette = "Reds")(8)
            )
          )
        } else if (input$update == "viridis") {
          updatePalettePicker(
            inputId = "pal4",
            choices = list(
              "viridis" = viridis_pal(option = "viridis")(10),
              "magma" = viridis_pal(option = "magma")(10),
              "inferno" = viridis_pal(option = "inferno")(10),
              "plasma" = viridis_pal(option = "plasma")(10),
              "cividis" = viridis_pal(option = "cividis")(10)
            ),
            textColor = "#FFF"
          )
        } else if (input$update == "brewer") {
          updatePalettePicker(
            inputId = "pal4",
            choices = list(
              "Blues" = brewer_pal(palette = "Blues")(8),
              "Reds" = brewer_pal(palette = "Reds")(8),
              "Paired" = brewer_pal(palette = "Paired")(8),
              "Set1" = brewer_pal(palette = "Set1")(8)
            )
          )
        }
      })
    }

    if (interactive()) {
      shinyApp(ui, server)
    }
```

---

match_geom_args   *Match list of arguments to arguments of geometry*

Description

Match list of arguments to arguments of geometry

Usage

```
match_geom_args(
  geom,
  args,
  add_aes = TRUE,
  mapping = list(),
  envir = "ggplot2"
)
```

Arguments

geom	Character. name of the geometry.
args	Named list, parameters to be matched to the geometry arguments.
add_aes	Add aesthetics parameters (like size, fill, ...).
mapping	Mapping used in plot, to avoid setting fixed aesthetics parameters.
envir	Package environment to search in.

Value

a list

Examples

```
# List of parameters
params <- list(
  bins = 30,
  scale = "width",
  adjust = 2,
  position = "stack",
  size = 1.6,
  fill = "#112246"
)

# Search arguments according to geom
match_geom_args(geom = "histogram", args = params)
match_geom_args(geom = "violin", args = params)
match_geom_args(geom = "bar", args = params, add_aes = FALSE)
match_geom_args(geom = "point", args = params)
match_geom_args(geom = "point", args = params, add_aes = FALSE)
```

module-chooseData   *Module for choosing data.frame*

Description

DEPRECATED, please see package datamods for similar features.

Usage

```
chooseDataUI(id, label = "Data", icon = "database", width = "100%", ...)

chooseDataServer(
  input,
  output,
  session,
  dataModule = c("GlobalEnv", "ImportFile"),
  data = NULL,
  name = NULL,
  selectVars = TRUE,
  selectedTypes = c("continuous", "discrete", "time"),
  coerceVars = FALSE,
  launchOnStart = TRUE,
  size = "m"
)
```

Arguments

id	Module's id.
label	Label for button, passed to actionButton.
icon	Icon to appears on the button, passed to actionButton.
width	Width of button, passed to actionButton.
...	Other arguments passed to actionButton
input, output, session	
	standards shiny server arguments.
dataModule	Data module to use, choose between "GlobalEnv" (select ad data.frame from Global environment) or "ImportFile" (import an external file supported by import).
data	A data.frame to use by default.
name	Character, object's name to use for data.
selectVars	Display module to select variables, TRUE by default.
selectedTypes	Type of variables selected by default in select variables module. Possible types are "discrete", "time", "continuous" and "id", by default "id" is discarded.
coerceVars	Display module to coerce variables between different class, TRUE by default.

launchOnStart   Opens modal window when the application starts.

size   Size for the modal window.

Value

a [reactiveValues](#) containing the data selected under slot data and the name of the selected
data.frame under slot name.

---

module-coerce   *Coerce data.frame's columns module*

Description

DEPRECATED, please see package [datamods](#) for similar features.

Usage

```
coerceUI(id)

coerceServer(input, output, session, data, reactiveValuesSlot = "data")
```

Arguments

id   Module id. See [callModule](#).

input, output, session
                        standards shiny server arguments.[2]

data   A data.frame or a reactive function returning a data.frame or a reactivevalues
                        with a slot containing a data.frame (use reactiveValuesSlot to identify that
                        slot)

reactiveValuesSlot
                        If data is a reactivevalues, specify the name of the slot containing data.

Value

a reactiveValues with two slots: data original data.frame with modified columns, and names
column's names with call to coerce method.

---

module-filterDF   *Shiny module to interactively filter a* `data.frame`

Description

DEPRECATED, please see package [datamods](#) for similar features.

Usage

```
filterDF_UI(id, show_nrow = TRUE)

filterDF(
  input,
  output,
  session,
  data_table = reactive(),
  data_vars = shiny::reactive(NULL),
  data_name = reactive("data"),
  label_nrow = "Number of rows:",
  drop_ids = TRUE,
  picker = FALSE
)
```

Arguments

`id`	Module id. See [`callModule`](#).
`show_nrow`	Show number of filtered rows and total.
`input, output, session`	
	standards `shiny` server arguments.
`data_table`	[`reactive`](#) function returning a `data.frame` to filter.
`data_vars`	[`reactive`](#) function returning a `character` vector of variable to use for filters.
`data_name`	[`reactive`](#) function returning a `character` string representing `data_table` name.
`label_nrow`	Text to display before the number of rows of filtered data / source data.
`drop_ids`	Drop columns containing more than 90% of unique values, or than 50 distinct values.
`picker`	Use [`shinyWidgets::pickerInput`](#) instead of [`shiny::selectizeInput`](#) (default).

Value

A `list` with 2 elements :

- **data_filtered** : [`reactive`](#) function returning data filtered.
- **code** : [`reactiveValues`](#) with 2 slots : `expr` (raw expression to filter data) and `dplyr` (code with dplyr pipeline).

potential_geoms *Potential geometries according to the data*

Description

Potential geometries according to the data

Usage

```
potential_geoms(data, mapping, auto = FALSE)
```

Arguments

data	A data.frame
mapping	List of aesthetic mappings to use with data.
auto	Return only one geometry.

Value

A character vector

Examples

```
library(ggplot2)

# One continuous variable
potential_geoms(
  data = iris,
  mapping = aes(x = Sepal.Length)
)

# Automatic pick a geom
potential_geoms(
  data = iris,
  mapping = aes(x = Sepal.Length),
  auto = TRUE
)

# One discrete variable
potential_geoms(
  data = iris,
  mapping = aes(x = Species)
)

# Two continuous variables
potential_geoms(
  data = iris,
  mapping = aes(x = Sepal.Length, y = Sepal.Width)
)
```

---

run_module *Run module example*

Description

DEPRECATED, please see package datamods for similar features.

Usage

```
run_module(module = c("filterDF", "chooseData", "chooseData2", "coerce"))
```

Arguments

module   Module for which to see a demo.

---

safe_ggplot *Safely render a* ggplot *in Shiny application*

Description

Safely render a ggplot in Shiny application

Usage

```
safe_ggplot(expr, data = NULL, session = shiny::getDefaultReactiveDomain())
```

Arguments

expr   Code to produce a ggplot object.

data   Argument passed to eval_tidy to evaluate expression.

session   Session object to send notification to.

Value

Output of ggplot_build.

Examples

```
if (interactive()) {
  library(shiny)
  library(ggplot2)

  ui <- fluidPage(
    fluidRow(
      column(
        width = 3,
```

```
      selectInput(
        inputId = "var",
        label = "Var:",
        choices = c("Sepal.Width", "Do.Not.Exist")
      )
    ),
    column(
      width = 9,
      plotOutput(outputId = "plot")
    )
  )
)

server <- function(input, output, session) {

  output$plot <- renderPlot({
    p <- ggplot(iris) +
      geom_point(aes_string("Sepal.Length", input$var))
    safe_ggplot(p)
  })

}

shinyApp(ui, server)
}
```

---

save-ggplot-module   *Save* ggplot *module*

Description

Save a ggplot object in various format and resize it before saving.

Usage

```
save_ggplot_ui(
  id,
  output_format = c("png", "pdf", "svg", "jpeg", "bmp", "eps", "tiff")
)

save_ggplot_modal(
  id,
  title = NULL,
  output_format = c("png", "pdf", "svg", "jpeg", "bmp", "eps", "tiff")
)

save_ggplot_server(id, plot_rv)
```

Arguments

`id`	Module ID.
`output_format`	Output formats offered to the user.
`title`	Modal's title.
`plot_rv`	A `reactiveValues` with a slot `plot` containing a ggplot object.

Value

No value. Use in UI & server of shiny application.

Examples

```
library(shiny)
library(ggplot2)
library(esquisse)


ui <- fluidPage(
  tags$h2("Save a ggplot"),
  selectInput("var", "Variable:", names(economics)[-1]),
  plotOutput("plot", width = "600px"),
  actionButton("save", "Save this plot")
)

server <- function(input, output, session) {

  rv <- reactiveValues(plot = NULL)

  output$plot <- renderPlot({
    rv$plot <- ggplot(economics) +
      geom_line(aes(date, !!sym(input$var))) +
      theme_minimal()
    rv$plot
  })

  observeEvent(input$save, {
    save_ggplot_modal("ID", "Save plot")
  })
  save_ggplot_server("ID", rv)
}

if (interactive())
  shinyApp(ui, server)
```

---

updateDragulaInput   *Update Dragula Input*

Description

Update Dragula Input

Usage

```
updateDragulaInput(
  session,
  inputId,
  choices = NULL,
  choiceNames = NULL,
  choiceValues = NULL,
  selected = NULL,
  selectedNames = NULL,
  selectedValues = NULL,
  badge = TRUE,
  status = "primary"
)
```

Arguments

session   The `session` object passed to function given to shinyServer.

inputId   The id of the input object.

choices   List of values to select from (if elements of the list are named then that name
                   rather than the value is displayed to the user). If this argument is provided, then
                   `choiceNames` and `choiceValues` must not be provided, and vice-versa. The
                   values should be strings; other types (such as logicals and numbers) will be
                   coerced to strings.

choiceNames, choiceValues

                   List of names and values, respectively, that are displayed to the user in the app
                   and correspond to the each choice (for this reason, choiceNames and choiceVal-
                   ues must have the same length). If either of these arguments is provided, then
                   the other must be provided and choices must not be provided. The advantage
                   of using both of these over a named list for choices is that choiceNames allows
                   any type of UI object to be passed through (tag objects, icons, HTML code, ...),
                   instead of just simple text.

selected   A `list` with `targetIds` as names to select values.

selectedNames, selectedValues

                   Update selected items with custom names and values.

badge   Displays choices inside a Bootstrap badge.

status   If choices are displayed into a Bootstrap badge, you can use Bootstrap status to
                   color them, or `NULL`.

Examples

```
if (interactive()) {
```

```
library("shiny")
library("esquisse")

ui <- fluidPage(
  tags$h2("Update dragulaInput"),
  radioButtons(
    inputId = "update",
    label = "Dataset",
    choices = c("iris", "mtcars")
  ),
  tags$br(),
  dragulaInput(
    inputId = "myDad",
    sourceLabel = "Variables",
    targetsLabels = c("X", "Y", "fill", "color", "size"),
    choices = names(iris),
    replace = TRUE, width = "400px", status = "success"
  ),
  verbatimTextOutput(outputId = "result")
)

server <- function(input, output, session) {

  output$result <- renderPrint(str(input$myDad))

  observeEvent(input$update, {
    if (input$update == "iris") {
      updateDragulaInput(
        session = session,
        inputId = "myDad",
        choices = names(iris),
        status = "success"
      )
    } else {
      updateDragulaInput(
        session = session,
        inputId = "myDad",
        choices = names(mtcars)
      )
    }
  }, ignoreInit = TRUE)

}

shinyApp(ui, server)

}
```

---

updateDropInput   *Change the value of a drop input on the client*

Description

Change the value of a drop input on the client

Usage

```
updateDropInput(session, inputId, selected = NULL, disabled = NULL)
```

Arguments

session	The `session` object passed to function given to `shinyServer`.
inputId	The id of the input object.
selected	The initially selected value.
disabled	Choices (`choicesValues`) to disable.

See Also

[dropInput](#)

Examples

```
if (interactive()) {

  library(shiny)
  library(esquisse)

  myChoices <- tagList(
    list(icon("home"), style = "width: 100px;"),
    list(icon("flash"), style = "width: 100px;"),
    list(icon("cogs"), style = "width: 100px;"),
    list(icon("fire"), style = "width: 100px;"),
    list(icon("users"), style = "width: 100px;"),
    list(icon("info"), style = "width: 100px;")
  )


  ui <- fluidPage(
    tags$h2("Update Drop Input"),
    fluidRow(
      column(
        width = 6,
        dropInput(
          inputId = "mydrop",
          choicesNames = myChoices,
          choicesValues = c("home", "flash", "cogs", "fire", "users", "info"),
          dropWidth = "220px"
        ),
        verbatimTextOutput(outputId = "res")
      ),
      column(
        width = 6,
```

```
        actionButton("home", "Select home"),
        actionButton("flash", "Select flash"),
        actionButton("cogs", "Select cogs"),
        actionButton("fire", "Select fire"),
        actionButton("users", "Select users"),
        actionButton("info", "Select info"),
        checkboxGroupInput(
          inputId = "disabled",
          label = "Choices to disable",
          choices = c("home", "flash", "cogs", "fire", "users", "info")
        ),
        actionButton("disable", "Disable")
      )
    )
  )

  server <- function(input, output, session) {

    output$res <- renderPrint({
      input$mydrop
    })

    observeEvent(input$home, {
      updateDropInput(session, "mydrop", "home")
    })
    observeEvent(input$flash, {
      updateDropInput(session, "mydrop", "flash")
    })
    observeEvent(input$cogs, {
      updateDropInput(session, "mydrop", "cogs")
    })
    observeEvent(input$fire, {
      updateDropInput(session, "mydrop", "fire")
    })
    observeEvent(input$users, {
      updateDropInput(session, "mydrop", "users")
    })
    observeEvent(input$info, {
      updateDropInput(session, "mydrop", "info")
    })

    observeEvent(input$disable, {
      if (!is.null(input$disabled)) {
        updateDropInput(session, "mydrop", disabled = input$disabled)
      } else {
        updateDropInput(session, "mydrop", disabled = character(0))
      }
    })
  }

  shinyApp(ui, server)

}
```

---

which_pal_scale   *Automatically select appropriate color scale*

Description

Automatically select appropriate color scale

Usage

```
which_pal_scale(
  mapping,
  palette = "ggplot2",
  data = NULL,
  fill_type = c("continuous", "discrete"),
  color_type = c("continuous", "discrete"),
  reverse = FALSE
)
```

Arguments

mapping	Aesthetics used in `ggplot`.
palette	Color palette.
data	An optional `data.frame` to choose the right type for variables.
fill_type, color_type	
	Scale to use according to the variable used in `fill`/`color` aesthetic : `"discrete"` or `"continuous"`. Ignored if `data` is provided: it will be guessed from data.
reverse	Reverse colors order or not.

Value

a `list`

Examples

```
library(ggplot2)

# Automatic guess according to data
which_pal_scale(
  mapping = aes(fill = Sepal.Length),
  palette = "ggplot2",
  data = iris
)
which_pal_scale(
  mapping = aes(fill = Species),
  palette = "ggplot2",
  data = iris
)
```

```
# Explicitly specify type
which_pal_scale(
  mapping = aes(color = variable),
  palette = "Blues",
  color_type = "discrete"
)


# Both scales
which_pal_scale(
  mapping = aes(color = var1, fill = var2),
  palette = "Blues",
  color_type = "discrete",
  fill_type = "continuous"
)
```

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