Package 'ViewR'

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Type Package

Title Advanced Interactive Data Tables and Data Explorer

Version 2.0.0

Description An advanced, interactive data table and data explorer for R, delivered as a modern, self-contained 'htmlwidget' with a high-performance virtualized grid. ViewR renders 'Kaggle'-style micro-dashboard column headers complete with data-type badges, mini distribution spark-histograms, and data-completeness (missingness) bars. It provides hover metadata cards, a sliding Data Insights drawer with interactive histograms and 'Pareto' category charts, a multi-condition visual query builder (AND/OR), a column visibility picker, and a reproducible code generator that emits 'dplyr', base R, and 'SQL' that matches the active filter and column state. The interface is implemented entirely in dependency-free vanilla 'JavaScript' (no 'React' or build toolchain) and works in the 'RStudio'/'Positron' Viewer, inside 'Shiny' apps, in 'R Markdown'/'Quarto', or as a portable standalone 'HTML' file. A single call to viewr() opens the explorer; the legacy 'Shiny'-gadget ViewR() editor remains available.

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Encoding UTF-8

Language en-GB

Depends R (>= 4.1.0)

URL https://github.com/itsmdivakaran/viewR, https://itsmdivakaran.github.io/viewR/

BugReports https://github.com/itsmdivakaran/viewR/issues

Imports htmlwidgets (>= 1.6.0), htmltools (>= 0.5.4), jsonlite (>= 1.8.0), shiny (>= 1.7.0), DT (>= 0.27), rhandsontable (>= 0.3.8), shinyjs (>= 2.1.0), shinythemes (>= 1.2.0), stats, utils

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`install_viewr_deps` *Install All ViewR Dependencies*

Description

Checks which required packages are missing from the user's library and installs them via `install.packages`.

Usage

```
install_viewr_deps(ask = TRUE)
```

Arguments

`ask`	Logical. If `TRUE` (default), prompt before installing.

Value

Invisibly returns a character vector of packages that were (or needed to be) installed.

Examples

```
## Not run:
install_viewr_deps()

## End(Not run)
```

save_viewdt *Save a ViewR explorer to a standalone HTML file*

Description

Exports any data frame as a fully interactive, offline ViewR explorer that runs in any browser without R or an internet connection.

Usage

```
save_viewdt(
  data,
  file,
  options = viewdt_options(),
  selfcontained = TRUE,
  title = "ViewR",
  dataset_name = NULL,
  open = FALSE
)
```

Arguments

data	A ‘data.frame‘ or ‘tibble‘ to export.
file	Output ‘.html‘ path.
options	A list created by [viewdt_options()].
selfcontained	Logical. If ‘TRUE‘ (default) bundle all assets into a single file (requires **pandoc**); if ‘FALSE‘, write a lightweight HTML file plus a companion ‘_files/‘ directory (recommended for large data).
title	Browser tab title. Default ‘"ViewR"‘.
dataset_name	Variable name used in generated code. Defaults to the deparsed ‘data‘ expression.
open	Logical. Open the file in a browser after saving (interactive sessions only). Default ‘FALSE‘.

Value

The output file path, invisibly.

Examples

```
## Not run:
save_viewdt(mtcars, "mtcars.html", open = TRUE)
save_viewdt(iris, "iris.html", selfcontained = FALSE)

## End(Not run)
```

`viewdt` *Modern interactive data explorer widget*

Description

Opens a high-performance, self-contained data explorer for a data frame. ‘viewdt()‘ profiles every column in R and renders a virtualized grid with “Kaggle”-style micro-dashboard headers (data-type badges, mini spark-histograms, and data-completeness bars), hover metadata cards, a sliding Data Insights drawer, a multi-condition visual query builder, a column-visibility picker, and a reproducible code generator (**dplyr**, base R, and SQL).

Usage

```
viewdt(
  data,
  options = viewdt_options(),
  dataset_name = NULL,
  width = NULL,
  height = NULL,
  elementId = NULL
)
```

Arguments

`data`	A ‘data.frame‘ or ‘tibble‘ to explore.
`options`	A list created by [viewdt_options()].
`dataset_name`	Character used as the data variable name in generated code. Defaults to the deparsed ‘data‘ expression.
`width, height`	Optional widget dimensions; default to a full-container responsive layout.
`elementId`	Optional explicit element id.

Details

The interface is implemented entirely in dependency-free vanilla JavaScript (no **React** or build toolchain) and works in the RStudio / Positron Viewer, inside Shiny, in R Markdown / Quarto, or as a portable standalone HTML file via [save_viewdt()].

Value

An ‘htmlwidget‘ object.

Examples

```
## Not run:
viewdt(mtcars)
viewdt(iris, options = viewdt_options(theme = "dark", hidden_columns = "Species"))

## End(Not run)
```

viewdt-shiny *Shiny bindings for viewdt*

Description

Output and render functions for using [viewdt()] within Shiny applications and interactive R Markdown documents.

Usage

```
viewdtOutput(outputId, width = "100%", height = "600px")

renderViewdt(expr, env = parent.frame(), quoted = FALSE)
```

Arguments

outputId	Output variable to read from.
width, height	Must be valid CSS units (e.g. '"100%"') or numbers.
expr	An expression that generates a [viewdt()] widget.
env	The environment in which to evaluate 'expr'.
quoted	Is 'expr' a quoted expression (with 'quote()')?

Value

'viewdtOutput()' returns a Shiny output UI element; 'renderViewdt()' returns a Shiny render function.

viewdt_options *Configure the ViewR data explorer*

Description

Builds the option list consumed by [viewdt()] and [save_viewdt()]. Every argument has a sensible default, so 'viewdt_options()' with no arguments returns a fully usable configuration.

Usage

```
viewdt_options(
  theme = c("auto", "light", "dark"),
  show_labels = TRUE,
  histograms = TRUE,
  missing_bars = TRUE,
  type_badges = TRUE,
  insights = TRUE,
```

```
  query_builder = TRUE,
  column_picker = TRUE,
  code_export = TRUE,
  global_search = TRUE,
  na_string = "NA",
  hidden_columns = NULL,
  page_size = 200L,
  hist_bins = 20L,
  top_n = 10L,
  max_cells = 5e+06
)
```

Arguments

theme	UI appearance: one of '"auto"' (default, follows the host/system colour scheme), '"light"', or '"dark"'.
show_labels	Logical. Display variable-label attributes (e.g. as set by **haven** or clinical ADaM data) inline in the column headers. Default 'TRUE'.
histograms	Logical. Render mini spark-histograms / category bars inside the column headers. Default 'TRUE'.
missing_bars	Logical. Render the data-completeness (missingness) bar at the bottom of each header. Default 'TRUE'.
type_badges	Logical. Show data-type badges in headers. Default 'TRUE'.
insights	Logical. Enable the sliding Data Insights drawer. Default 'TRUE'.
query_builder	Logical. Enable the multi-condition visual query builder. Default 'TRUE'.
column_picker	Logical. Enable the column-visibility picker. Default 'TRUE'.
code_export	Logical. Enable the reproducible code generator (dplyr / base R / SQL). Default 'TRUE'.
global_search	Logical. Enable the global search box. Default 'TRUE'.
na_string	Character. Placeholder shown for missing values. Default '"NA"'.
hidden_columns	Character vector of column names hidden on first render. Default 'NULL'.
page_size	Integer. Rows kept in the virtualized DOM buffer. Default '200L'.
hist_bins	Integer. Number of bins for numeric histograms. Default '20L'.
top_n	Integer. Number of categories profiled for character columns. Default '10L'.
max_cells	Integer. Soft safeguard; data frames with more than this many cells ('nrow * ncol') trigger a warning. Default '5e6'.

Value

A named list of class '"viewdt_options"'.

Examples

```
viewdt_options(theme = "dark", hidden_columns = c("cyl", "hp"))
```

ViewR *ViewR: Interactive Data Viewer, Filter, and Editor*

Description

Opens a feature-rich, popup-based Shiny interface for viewing, exploring, filtering, sorting, editing, and analysing R data frames. All operations are reflected in real-time as copy-pasteable **dplyr** code.

Usage

```
ViewR(
  data,
  edit = FALSE,
  popup = TRUE,
  labels = NULL,
  title = NULL,
  viewer = c("dialog", "browser", "pane"),
  generate_code = TRUE,
  theme = c("flatly", "cerulean", "cosmo", "darkly", "lumen", "paper", "readable",
    "sandstone", "simplex", "spacelab", "united", "yeti"),
  max_display = 50000L,
  return_data = TRUE,
  ...
)
```

Arguments

data	A `data.frame` or `tibble` to view / edit.
edit	Logical. Enable the Excel-like editing tab. Default `FALSE`.
popup	Logical. If `TRUE` (default), open in a popup dialog; if `FALSE`, open in the system browser.
labels	Optional named character vector of variable labels. Names must match column names of `data`. If `NULL`, labels are read from column attributes (e.g.\ as set by **haven**).
title	Window title. Defaults to the name of `data`.
viewer	Where to display the interface: `"dialog"` Popup dialog (default when popup = `TRUE`). `"browser"` System web browser. `"pane"` RStudio Viewer pane.
generate_code	Logical. Show the R Code tab. Default `TRUE`.
theme	Bootstrap theme for the UI. One of `"flatly"` (default), `"cerulean"`, `"cosmo"`, `"darkly"`, `"lumen"`, `"paper"`, `"readable"`, `"sandstone"`, `"simplex"`, `"spacelab"`, `"united"`, `"yeti"`.

`max_display`	Integer. Maximum rows rendered in the Data View table (for performance). Default `50000`.
`return_data`	Logical. When the user clicks *Done*, return the (possibly edited) data frame. Default `TRUE`.
`...`	Reserved for future arguments; currently ignored.

Value

If `return_data = TRUE` and the user clicked *Done*, returns the modified data frame invisibly. Otherwise returns the original data frame invisibly.

Features

- **Data View** - searchable, paginated DT table with optional variable-label tooltips and column-level search filters.
- **Sidebar Filters** - add unlimited filter conditions with operators ==, !=, >, >=, <, <=, *contains*, *starts with*, *ends with*, *is NA*, *is not NA*; combine with AND / OR logic.
- **Multi-column Sort** - add multiple sort levels; choose ascending or descending per column.
- **Column Visibility** - show/hide any columns via checkboxes.
- **Excel-like Editor** (`edit = TRUE`) - powered by **rhandsontable**; supports in-cell editing, adding rows, and unlimited undo/redo.
- **Find & Replace** - find literal text or regex across one or all columns with case-sensitivity and exact-match options; preview changes before applying.
- **Variable Info** - data type, N, missing min, max, and sample values for every column.
- **R Code Generation** - the *R Code* tab always shows the complete, runnable **dplyr** pipeline for the current state. One click copies it to the clipboard.

Examples

```
## Not run:
## -- Basic view ------------------------------------------------------------
ViewR(mtcars)

## -- Edit mode: returns modified data --------------------------------------
new_iris <- ViewR(iris, edit = TRUE)

## -- Custom labels + dark theme --------------------------------------------
ViewR(mtcars,
      labels = c(mpg = "Miles per Gallon",
                 cyl = "Number of Cylinders",
                 hp  = "Gross Horsepower"),
      theme  = "darkly")

## -- Open in the system browser --------------------------------------------
ViewR(iris, viewer = "browser", generate_code = TRUE)

## -- View a haven-imported dataset (labels read automatically) -------------
# df <- haven::read_sav("my_survey.sav")
```

```
# ViewR(df)

## End(Not run)
```

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