Package: OptirrigVIEW (via r-universe)

May 23, 2026

Type Package

Title Visualization Tools for Optirrig Outputs and Tabular Data

Version 0.1.0

Description A visualization package for Optirrig outputs and generic tabular data. It provides a small plotting core built around ggplot2 to normalize heterogeneous inputs, build reusable graphics, and optionally compose multi-panel views for Optirrig workflows.

Encoding UTF-8

License AGPL (>= 3)

BugReports https://forge.inrae.fr/OptirrigHIVE/OptirrigVIEW/-/issues

URL https://forge.inrae.fr/OptirrigHIVE/OptirrigVIEW

Depends R (>= 3.5.0)

Imports dplyr, ggplot2, grid, rlang, tidyr

Suggests kableExtra, knitr, patchwork, plotly, rmarkdown, scales, testthat

RoxygenNote 7.3.3

Config/testthat/edition 3

Roxygen list(markdown = TRUE)

Config/pak/sysreqs libicu-dev

Repository https://inrae.r-universe.dev

Date/Publication 2026-04-23 12:48:01 UTC

RemoteUrl https://forge.inrae.fr/OptirrigHIVE/OptirrigVIEW

RemoteRef main

RemoteSha e80b39ba10dcbb3d21c268ae4ab5cf16c409d9b6

Contents

`optirrig_palette` *Optirrig palette*

Description

Default color palette used by OptirrigVIEW.

Usage

```
optirrig_palette

optirrig_view_palette
```

Format

An object of class `character` of length 6.

An object of class `character` of length 6.

Value

A named character vector of hex colors.

plot.data.frame *Plot method for tabular data*

Description

Plot method for tabular data

Usage

```
## S3 method for class 'data.frame'
plot(x, options = NULL, geom = "line", interactive = FALSE, ...)
```

Arguments

x	A data frame.
options	Optional OptirrigVIEW plotting options.
geom	Default geometry to draw.
interactive	If TRUE, return a plotly object for single plots.
...	Additional arguments passed to view_data().

Value

A ggplot object, a composed patchwork object, or a plotly object when requested for a single panel.

plot.list *Plot method for list inputs*

Description

Plot method for list inputs

Usage

```
## S3 method for class 'list'
plot(x, options = NULL, geom = "line", interactive = FALSE, ...)
```

Arguments

x	A list of tables, matrices, or nested Optirrig-like outputs.
options	Optional OptirrigVIEW plotting options.
geom	Default geometry to draw.
interactive	If TRUE, return a plotly object for single plots.
...	Additional arguments passed to view_data().

Value

A ggplot object, a composed patchwork object, or a plotly object when requested for a single panel.

`plot.matrix` *Plot method for matrix data*

Description

Plot method for matrix data

Usage

```
## S3 method for class 'matrix'
plot(x, options = NULL, geom = "line", interactive = FALSE, ...)
```

Arguments

x	A matrix.
options	Optional OptirrigVIEW plotting options.
geom	Default geometry to draw.
interactive	If TRUE, return a plotly object for single plots.
...	Additional arguments passed to view_data().

Value

A ggplot object, a composed patchwork object, or a plotly object when requested for a single panel.

`plot.model_output` *Plot method for a single Optirrig model output*

Description

Plot method for a single Optirrig model output

Usage

```
## S3 method for class 'model_output'
plot(x, y = NULL, obs = NULL, options = NULL, ...)
```

Arguments

x	A model_output object, typically one element of OptirrigCORE::run_model() output.
y	Optional shortcut passed to plot.model_outputs().
obs	Optional observed data passed to plot.model_outputs().
options	Optional list passed to plot.model_outputs().
...	Additional arguments passed to plot.model_outputs().

Value

A ggplot object, a composed patchwork object, or a plotly object when requested for a single panel.

---

plot.model_outputs *Plot method for Optirrig model outputs*

Description

This method lets plot() normalize model_outputs internally. It supports direct graph definitions with x, y, and optional y_bis, so the user does not need to call view_data() for each panel.

Usage

```
## S3 method for class 'model_outputs'
plot(
  x,
  y = NULL,
  obs = NULL,
  geom = "line",
  interactive = FALSE,
  options = NULL,
  ...
)
```

Arguments

x	A model_outputs object, typically returned by OptirrigCORE::run_model().
y	Optional shortcut. A character value is treated as options$y; otherwise it is treated as observed data for compatibility with plot(x, y, ...).
obs	Optional observed data. Use a named list such as list(LAI = data.frame(Date = ..., LAI = ...)), or one data frame with matching variable columns.
geom	Default geometry to draw.
interactive	If TRUE, return a plotly object for single plots.

options	Optional list. Supported top-level entries are x, y, y_bis (or y2), geom, geom_bis, values, regex, filter, plots, layout, theme, title, subtitle, plot_args, and guides. Compatibility aliases from OptirrigTOOLS::plot_outputs() include outs, runs_id, run_prefix, pos, main, time_opt, yield_var, ratio, palette, ylim, and legend_position. When x is supplied, it is treated as the name of the output column to use on the x axis and overrides the time_opt defaults for axis labeling. When plots is supplied, each graph can be defined as a string "LAI" or as a list with x, y, optional y_bis, and graph options such as geom, title, x_lab, y_lab, y2_lab, theme, palette, alpha, and filter.
...	Additional arguments passed to view_plot().

Value

A ggplot object, or a plotly object when interactive = TRUE.

---

plot.optirrig_view_data

Plot method for normalized OptirrigVIEW data

Description

Plot method for normalized OptirrigVIEW data

Usage

```
## S3 method for class 'optirrig_view_data'
plot(x, geom = "line", interactive = FALSE, options = NULL, ...)
```

Arguments

x	An optirrig_view_data object.
geom	Geometry to draw.
interactive	If TRUE, return a plotly object.
options	Optional list used to recover the historical plot(x, options = list(...)) style. Supported entries are: plots, layout, theme, title, subtitle, plot_args, and guides. plots must be a named list of objects created with plot_vars(). Graph-level filter functions can be passed inside plot_vars(..., options = list(filter = ...)). Legacy panels definitions are still accepted and converted internally.
...	Additional arguments passed to view_plot().

Value

A ggplot object, or a plotly object when interactive = TRUE.

plot_vars *Build an OptirrigVIEW graph specification*

Description

plot_vars() defines one independent graph before panel composition. Use the returned object inside plot(x, options = list(plots = ...)), then organize the panel layout separately with layout.

Usage

```
plot_vars(var_1 = NULL, var_2, var_3 = NULL, options = NULL)
```

Arguments

var_1	Column used on the x axis. If NULL, reuse the normalized x mapping.
var_2	Primary y specification.
var_3	Optional secondary y specification.
options	Optional list with graph-level options. Supported entries are title, subtitle, x_lab, y_lab, y2_lab, theme, palette, alpha, filter, and plot_args.

Details

var_1 defines the x axis column. var_2 defines the primary y variable(s), and var_3 optionally defines a secondary y axis. var_2 and var_3 accept either a regex string, or a list with entries such as series, regex, values, geom, and label.

Value

An object of class optirrig_view_plot_spec.

theme_optirrig *Optirrig ggplot theme*

Description

Lightweight theme used by view_plot().

Usage

```
theme_optirrig(base_size = 12, legend_position = "top")

theme_optirrig_view(base_size = 12, legend_position = "top")
```

Arguments

base_size	Base font size.
legend_position	Legend position passed to ggplot2::theme().

Value

A ggplot2 theme.

---

view_compose *Compose multiple OptirrigVIEW plots*

Description

view_compose() combines several named ggplot objects into a single layout. The layout argument accepts the same compact row syntax as the historical Optirrig plotting helpers, for example "graph1 | graph2 / graph3 | graph4".

Usage

```
view_compose(
  plots,
  layout = NULL,
  title = NULL,
  subtitle = NULL,
  theme = NULL,
  guides = "collect"
)
```

Arguments

plots	Named list of ggplot objects.
layout	Optional layout description. Use | to place plots on the same row and / to stack rows.
title, subtitle	Optional global annotation.
theme	Optional theme object, or a function returning one, applied to each plot before composition.
guides	Guide collection mode passed to patchwork::plot_layout().

Value

A ggplot object for a single plot, or a composed patchwork object.

view_data *Normalize data for OptirrigVIEW plots*

Description

view_data() converts several common input shapes into a plotting table with stored column mappings. This object can then be passed directly to view_plot() or plot().

Usage

```
view_data(x, ...)

## S3 method for class 'data.frame'
view_data(
  x,
  x_var = NULL,
  y_var = NULL,
  value_vars = NULL,
  series = NULL,
  facet = NULL,
  ymin = NULL,
  ymax = NULL,
  group = NULL,
  names_to = "series",
  values_to = "value",
  drop_na = TRUE,
  ...
)

## S3 method for class 'list'
view_data(
  x,
  x_var = NULL,
  y_var = NULL,
  value_vars = NULL,
  series = NULL,
  facet = NULL,
  ymin = NULL,
  ymax = NULL,
  group = NULL,
  names_to = "series",
  values_to = "value",
  drop_na = TRUE,
  ...
)

## S3 method for class 'matrix'
```

```
view_data(
  x,
  x_var = NULL,
  y_var = NULL,
  value_vars = NULL,
  series = NULL,
  facet = NULL,
  ymin = NULL,
  ymax = NULL,
  group = NULL,
  names_to = "series",
  values_to = "value",
  drop_na = TRUE,
  ...
)

## Default S3 method:
view_data(x, ...)

## S3 method for class 'optirrig_view_data'
view_data(x, ...)
```

Arguments

x	Object to normalize.
...	Unused.
x_var	Column used on the x axis.
y_var	Column used on the y axis when data is already long.
value_vars	Columns to pivot to a long value column.
series	Optional grouping column.
facet	Optional faceting column.
ymin, ymax	Optional lower and upper bound columns, mainly for ribbons.
group	Optional grouping column passed to geoms.
names_to	Name of the column created by tidyr::pivot_longer().
values_to	Name of the value column created by tidyr::pivot_longer().
drop_na	If TRUE, remove rows with missing plotted values.

Value

An object of class optirrig_view_data.

view_plot *Build an OptirrigVIEW plot*

Description

`view_plot()` accepts either raw data or the normalized output of `view_data()`. The function keeps the plotting API intentionally small and handles the most common plot types used across Optirrig packages.

Usage

```
view_plot(
  x,
  geom = c("line", "point", "col", "boxplot", "ribbon", "area"),
  x_var = NULL,
  y_var = NULL,
  value_vars = NULL,
  series = NULL,
  facet = NULL,
  ymin = NULL,
  ymax = NULL,
  group = NULL,
  names_to = "series",
  values_to = "value",
  drop_na = TRUE,
  title = NULL,
  subtitle = NULL,
  x_lab = NULL,
  y_lab = NULL,
  palette = optirrig_palette,
  series_values = NULL,
  scales = "free_y",
  alpha = NULL,
  interactive = FALSE,
  tooltip = NULL,
  ...
)
```

Arguments

`x`	Object to plot.
`geom`	Geometry to draw.
`x_var`, `y_var`, `value_vars`, `series`, `facet`, `ymin`, `ymax`, `group`, `names_to`, `values_to`, `drop_na`	Passed to `view_data()` when `x` is not already normalized.
`title`, `subtitle`	Plot labels.

x_lab, y_lab	Axis labels.
palette	Color palette used for grouped plots.
series_values	Optional complete set of series values to keep in the legend, even when some series are absent from one panel.
scales	Facet scales passed to ggplot2::facet_wrap().
alpha	Geom transparency.
interactive	If TRUE, return a plotly object.
tooltip	Optional tooltip vector passed to plotly::ggplotly().
...	Unused.

Value

A ggplot object, or a plotly object when interactive = TRUE.

---

view_plotly *Convert a ggplot to plotly*

Description

Convert a ggplot to plotly

Usage

```
view_plotly(x, tooltip = NULL)
```

Arguments

x	A ggplot object.
tooltip	Optional tooltip vector forwarded to plotly::ggplotly().

Value

A plotly object.

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