Package ‘trelliscopejs’

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Title Create Interactive Trelliscope Displays

Version 0.2.5

Description Trelliscope is a scalable, flexible, interactive approach to visualizing data (Hafen, 2013 <doi:10.1109/LDAV.2013.6675164>). This package provides methods that make it easy to create a Trelliscope display specification for TrelliscopeJS. High-level functions are provided for creating displays from within ‘tidyverse’ or ‘ggplot2’ workflows. Low-level functions are also provided for creating new interfaces.

Depends R (>= 3.4.0)

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LazyData true

Imports dplyr, purrr, grid, htmltools, DistributionUtils, grDevices, gtable, digest, jsonlite, ggplot2 (>= 3.2.1), base64enc, htmlwidgets, graphics, progress, utils, knitr, webshot, autocogs, tidyr, rlang

Suggests plotly, testthat, covr, gapminder, housingData

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BugReports https://github.com/hafen/trelliscopejs/issues

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trelliscopejs-package  
trelliscopejs

Description

Create interactive Trelliscope displays

Details

http://hafen.github.io/trelliscopejs/

Examples

help(package = trelliscopejs)
as_cognostics

Cast a data frame as a cognostics data frame

Description

Cast a data frame as a cognostics data frame

Usage

as_cognostics(
  x,
  cond_cols,
  key_col = NULL,
  cog_desc = NULL,
  needs_key = TRUE,
  needs_cond = TRUE,
  group = "common"
)

Arguments

- **x**: a data frame
- **cond_cols**: the column name(s) that comprise the conditioning variables
- **key_col**: the column name that indicates the panel key
- **cog_desc**: an optional named list of descriptions for the cognostics columns
- **needs_key**: does the result need to have a "key" column?
- **needs_cond**: does the result need to have conditioning variable columns?
- **group**: value to be used in the cog group

---

cog

Cast Column as a Cognostic

Description

Cast a column of a cognostics data frame as a cognostic object
Usage
cog(
  val = NULL,
  desc = "",
  group = "common",
  type = NULL,
  default_label = FALSE,
  default_active = TRUE,
  filterable = TRUE,
  sortable = TRUE,
  log = NULL
)

Arguments

val a scalar value (numeric, character, date, etc.)
desc a description for this cognostic value
group optional categorization of the cognostic for organizational purposes in the viewer (currently not implemented in the viewer)
type the desired type of cognostic you would like to compute (see details)
default_label should this cognostic be used as a panel label in the viewer by default?
default_active should this cognostic be active (available for sort / filter / sample) by default?
filterable should this cognostic be filterable? Default is TRUE. It can be useful to set this to FALSE if the cognostic is categorical with many unique values and is only desired to be used as a panel label.
sortable should this cognostic be sortable?
log when being used in the viewer for visual univariate and bivariate filters, should the log be computed? Useful when the distribution of the cognostic is very long-tailed or has large outliers. Can either be a logical or a positive integer indicating the base.

Details

Different types of cognostics can be specified through the type argument that will affect how the user is able to interact with those cognostics in the viewer. This can usually be ignored because it will be inferred from the implicit data type of val. But there are special types of cognostics, such as geographic coordinates and relations (not implemented) that can be specified as well. Current possibilities for type are "key", "integer", "numeric", "factor", "date", "time", "href".

Value

object of class "cog"
Examples

```r
library(dplyr)
library(tidyr)
library(purrr)
library(ggplot2)
library(plotly)

mpg_cog <- mpg %>%
  nest(data = !one_of(c("manufacturer", "class"))) %>%
  mutate(
    cogs = map_cog(data, ~ tibble(
      mean_city_mpg = cog(mean(.\$cty), desc = "Mean city mpg"),
      mean_hwy_mpg = cog(mean(.\$hwy), desc = "Mean highway mpg"),
      most_common_drv = cog(tail(names(table(.\$drv)), 1), desc = "Most common drive type")
    ),
    panel = map_plot(data, function(x) {
      plot_ly(data = x, x = ~cty, y = ~hwy,
        type = "scatter", mode = "markers") %>%
        layout(
          xaxis = list(range = c(9, 47)),
          yaxis = list(range = c(7, 37))
        )
    })),

  trelliscope(mpg_cog, name = "city_vs_highway_mpg", nrow = 1, ncol = 2)
```

---

Cogs Wrapper Function

Description

Cogs Wrapper Function

Usage

```r
cogs(.x, .f, ...)```

Arguments

- `.x` a list or atomic vector (see `map` for details)
- `.f` a function, formula, or atomic vector (see `map` for details)
- `...` additional arguments passed on to `.f` (see `map` for details)

Details

See `map`
Examples

library(dplyr)
library(tidyr)
library(plotly)
ggplot2::mpg %>%
  nest(data = !one_of(c("manufacturer", "class"))) %>%
mutate(
  additional_cogs = map_cog(data, function(x) {
    tibble(
      max_city_mpg = cog(max(x$cty), desc = "Max city mpg"),
      min_city_mpg = cog(min(x$cty), desc = "Min city mpg")
    )
  }),
  panel = map_plot(data, function(x) {
    plot_ly(data = x, x = ~cty, y = ~hwy,
      type = "scatter", mode = "markers"
    )
  })
) %>%
trelliscope(name = "city_vs_highway_mpg", nrow = 1, ncol = 2)

cog_disp_filter  

Helper function for creating a cognostic for a link to another display in a filtered state

Description

Helper function for creating a cognostic for a link to another display in a filtered state

Usage

cog Disp Filter(
  display,  
  var,  
  val,  
  desc = "link",  
  group = "common",  
  default_label = FALSE,  
  default_active = FALSE,  
  filterable = FALSE,  
  sortable = FALSE
)

Arguments

display A string indicating the name of the display to link to.
var A string indicating the variable name to filter on.
val A string indicating the value of the filter.
cog_href

desc          a description for this cognostic value

group         optional categorization of the cognostic for organizational purposes in the viewer (currently not implemented in the viewer)

default_label should this cognostic be used as a panel label in the viewer by default?

default_active should this cognostic be active (available for sort / filter / sample) by default?

filterable    should this cognostic be filterable? Default is TRUE. It can be useful to set this to FALSE if the cognostic is categorical with many unique values and is only desired to be used as a panel label.

sortable      should this cognostic be sortable?

---

cog_href   Href Cognostic

Description

Create href to be used as cognostics in a trelliscope display

Usage

cog_href(
  x,
  desc = "link",
  group = "common",
  default_label = FALSE,
  default_active = FALSE,
  filterable = FALSE,
  sortable = FALSE,
  log = FALSE
)

Arguments

  x            URL to link to
desc, group, default_label, default_active, filterable, sortable, log arguments passed to cog

See Also

cog
library(dplyr)
library(tidyr)
library(plotly)
iris %>%
nest(data = ~Species) %>%
mutate(
  panel = map_plot(data, function(x) {
    plot_ly(data = x, x = ~Sepal.Length, y = ~Sepal.Width,
    type = "scatter", mode = "markers")
  }),
  wiki_link = cog_href(paste0("https://en.wikipedia.org/wiki/Iris_",
    tolower(Species))[[1]], default_label = TRUE,
    desc = "link to species on wikipedia")
) %>%
trelliscope(name = "iris_species", ncol = 3)

---

facet_trelliscope  Facet Trelliscope

**Description**

Facet Trelliscope

**Usage**

facet_trelliscope(
  facets,
  nrow = 1,
  ncol = 1,
  scales = "same",
  name = NULL,
  group = "common",
  desc = ggplot2::waiver(),
  md_desc = ggplot2::waiver(),
  path = NULL,
  height = 500,
  width = 500,
  state = NULL,
  jsonp = TRUE,
  as_plotly = FALSE,
  plotly_args = NULL,
  plotly_cfg = NULL,
  split_sig = NULL,
  self_contained = FALSE,
  thumb = TRUE,
facet_trelliscope

```r
auto_cog = FALSE,
split_layout = FALSE,
data = ggplot2::waiver()
)
```

**Arguments**

- `facets` formula to facet the panels on. Similar to `ggplot2::facet_wrap`'s facets
- `nrow` the number of rows of panels to display by default
- `ncol` the number of columns of panels to display by default
- `scales` should scales be the same ("same", the default), free ("free"), or sliced ("sliced"). May provide a single string or two strings, one for the X and Y axis respectively.
- `name` name of the display
- `group` group that the display belongs to
- `desc` description of the display
- `md_desc` optional string of markdown that will be shown in the viewer for additional context about the display
- `path` the base directory of the trelliscope application
- `height` height in pixels of each panel
- `width` width in pixels of each panel
- `state` the initial state the display will open in
- `jsonp` should json for display object be jsonp (TRUE) or json (FALSE)?
- `as_plotly` should the panels be written as plotly objects?
- `plotly_args` optional named list of arguments to send to `ggplotly`
- `plotly_cfg` optional named list of arguments to send to `plotly`'s `config` method
- `split_sig` optional string that specifies the "signature" of the data splitting. If not specified, this is calculated as the md5 hash of the sorted unique facet variables. This is used to identify "related displays" - different displays that are based on the same faceting scheme. This parameter should only be specified manually if a display's faceting is mostly similar to another display's.
- `self_contained` should the Trelliscope display be a self-contained html document? (see note)
- `thumb` should a thumbnail be created?
- `auto_cog` should auto cogs be computed (if possible)?
- `split_layout` boolean that determines if the layout is split into components like a `facet_grid` vs. individual panels like `facet_wrap`. Only applies to `ggplot2` plot objects.
- `data` data used for faceting. Defaults to the first layer data

**Note**

Note that `self_contained` is severely limiting and should only be used in cases where you would either like your display to show up in the RStudio viewer pane, in an interactive R Markdown Notebook, or in a self-contained R Markdown html document.
Examples

```r
## Not run:
library(ggplot2)

# basically swap out facet_wrap for facet_trelliscope
qplot(cty, hwy, data = mpg) +
  facet_trelliscope(~ class + manufacturer)

# not required, but if you set labels, these will be added as
# descriptions to the cognostics that are automatically computed
mpg <- set_labels(mpg, mpg_labels)
qplot(cty, hwy, data = mpg) +
  theme_bw() +
  facet_trelliscope(~ manufacturer + class, nrow = 2, ncol = 4)

# using plotly
library(plotly)
qplot(cty, hwy, data = mpg) +
  theme_bw() +
  facet_trelliscope(~ manufacturer + class, nrow = 2, ncol = 4, as_plotly = TRUE)

qplot(class, cty, data = mpg, geom = c("boxplot", "jitter"), na.rm = TRUE) +
  facet_trelliscope(~ class, ncol = 7, height = 800, width = 200, state = list(sort = list(sort_spec("cty_mean")))) +
  theme_bw()

library(gapminder)
qplot(year, lifeExp, data = gapminder) +
  xlim(1948, 2011) + ylim(10, 95) + theme_bw() +
  facet_trelliscope(~ country + continent, nrow = 2, ncol = 7, width = 300, as_plotly = TRUE,
  plotly_cfg = list(displayModeBar = FALSE))

## End(Not run)
```

---

### img_panel

*Cast a vector of URLs pointing to images as an image panel source*

---

**Description**

Cast a vector of URLs pointing to images as an image panel source

**Usage**

```r
img_panel(x)
```

**Arguments**

- `x` a vector of URLs pointing to images
### img_panel_local

Cast a vector of URLs pointing to local images as an image panel source

**Description**

Cast a vector of URLs pointing to local images as an image panel source.

**Usage**

```r
img_panel_local(x)
```

**Arguments**

- `x` a vector of URLs pointing to images

**Note**

`x` must be paths relative to the path argument passed to `trelliscope`.

**Examples**

```r
## Not run:
# assuming images are available locally in relative path pokemon_local/images
pokemon$img <- img_panel_local(paste0("images/", basename(pokemon$url_image)))
trelliscope(pokemon, name = "pokemon", path = "pokemon_local")
## End(Not run)
```

### map2_cog

Map over multiple inputs simultaneously and return a vector of cognostics data frames

**Description**

Map over multiple inputs simultaneously and return a vector of cognostics data frames.

**Usage**

```r
map2_cog(.x, .y, .f, 
```

```r
pmap_cog(.l, .f, 
```
Arguments

.x, .y  Vectors of the same length. A vector of length 1 will be recycled.
.f     A function, formula, or atomic vector (see map2 for details)
...    additional arguments passed on to .f.
.l     A list of lists. The length of .l determines the number of arguments that .f will be called with. List names will be used if present.

Details

See map2

Examples

library(tidyr)
library(purrr)
library(plotly)
library(dplyr)

iris %>%
  nest(data = -Species) %>%
  mutate(
    mod = map(data, ~ lm(Sepal.Length ~ Sepal.Width, data = .x)),
    cogs = map2_cog(data, mod, function(data, mod) {
      tibble(max_sl = max(data$Sepal.Length), slope = coef(mod)[2])
    }),
    panel = map2_plot(data, mod, function(data, mod) {
      plot_ly(data = data, x = ~Sepal.Width, y = ~Sepal.Length,
              type = "scatter", mode = "markers", name = "data") %>%
      add_trace(data = data, x = ~Sepal.Width, y = ~predict(mod),
                mode = "lines", name = "lm")
    })) %>%
  trelliscope(name = "iris")

map2_plot  Map over multiple inputs simultaneously and return a vector of plots

Description

Map over multiple inputs simultaneously and return a vector of plots

Usage

map2_plot(.x, .y, .f, ...)
pmap_plot(.l, .f, ...)


map_cog

Arguments

- `.x, .y`  
  Vectors of the same length. A vector of length 1 will be recycled.
- `.f`  
  A function, formula, or atomic vector (see `map2` for details)
- `...`  
  Additional arguments passed on to `.f`.
- `.l`  
  A list of lists. The length of `.l` determines the number of arguments that `.f` will be called with. List names will be used if present.

Details

See `map2`

Examples

```r
library(tidyr)
library(purrr)
library(plotly)
library(dplyr)
iris %>%
  nest(data = -Species) %>%
  mutate(
    mod = map(data, ~ lm(Sepal.Length ~ Sepal.Width, data = .x)),
    panel = map2_plot(data, mod, function(data, mod) {
      plot_ly(data = data, x = ~Sepal.Width, y = ~Sepal.Length,
        type = "scatter", mode = "markers", name = "data") %>%
      add_trace(data = data, x = ~Sepal.Width, y = ~predict(mod),
        mode = "lines", name = "lm")
    })) %>%
  trelliscope(name = "iris")
```

---

**map_cog**

Apply a function to each element of a vector and return a vector of cognostics data frames

Description

Apply a function to each element of a vector and return a vector of cognostics data frames

Usage

`map_cog(.x, .f, ...)`

Arguments

- `.x`  
  A list or atomic vector (see `map` for details)
- `.f`  
  A function, formula, or atomic vector (see `map` for details)
- `...`  
  Additional arguments passed on to `.f` (see `map` for details)
map_plot

Apply a function to each element of a vector and return a vector of plots

Description

Apply a function to each element of a vector and return a vector of plots

Usage

map_plot(.x, .f, ...)

Arguments

.x a list or atomic vector (see map for details)
.f a function, formula, or atomic vector (see map for details)
... additional arguments passed on to .f (see map for details)

Details

See map
Examples

```r
library(dplyr)
library(tidyr)
library(purrr)
library(plotly)
library(gapminder)

# nest gapminder data by country
by_country <- gapminder %>%
  nest(data = !one_of(c("country", "continent")))

# add in a plot column with map_plot
by_country <- by_country %>% mutate(
  panel = map_plot(data, function(x) {
    plot_ly(data = x, x = ~year, y = ~lifeExp,
    type = "scatter", mode = "markers") %>%
    layout(
      xaxis = list(range = c(1948, 2011)),
      yaxis = list(range = c(10, 95)))
  })))

# plot it
by_country %>%
  trelliscope("gapminder", nrow = 2, ncol = 7, width = 300)

# example using mpg data
ggplot2::mpg %>%
  nest(data = !one_of(c("manufacturer", "class"))) %>%
  mutate(panel = map_plot(data, function(x) {
    plot_ly(data = x, x = ~hwy, y = ~cty,
    type = "scatter", mode = "markers")
  })) %>%
  trelliscope(name = "city_vs_highway_mpg")
```

---

**mpg_labels**

*Labels for ggplot2 "mpg" data*

**Description**

Labels for ggplot2 "mpg" data

**Usage**

`mpg_labels`

**Format**

An object of class `list` of length 10.
**Description**

Panels Wrapper Function

**Usage**

```r
panels(.x, .f, ...)
```

**Arguments**

- `.x`: a list or atomic vector (see `map` for details)
- `.f`: a function, formula, or atomic vector (see `map` for details)
- `...`: additional arguments passed on to `.f` (see `map` for details)

**Details**

See `map`

**Examples**

```r
library(dplyr)
library(tidyr)
library(plotly)

ggplot2::mpg %>%
  nest(data = !one_of(c("manufacturer", "class"))) %>%
  mutate(panel = map_plot(data, function(x) {
    plot_ly(data = x, x = ~hwy, y = ~cty,
    type = "scatter", mode = "markers")
  })) %>%
  trelliscope(name = "city_vs_highway_mpg")
```

---

**prepare_display**

*Set up all auxiliary files needed for a Trelliscope app*

**Description**

Set up all auxiliary files needed for a Trelliscope app

**Usage**

```r
prepare_display(base_path, id, selfcontained = FALSE, jsonp = TRUE, pb = NULL)
```
print.facet_trelliscope

Arguments
- base_path: the base directory of the trelliscope application
- id: a unique id for the application
- self_contained: should the Trelliscope display be a self-contained html document?
-jsonp: should json for display list and app config be jsonp (TRUE) or json (FALSE)?
- pb: optional progress bar object to pass in and use to report progress

Description
Print facet trelliscope object

Usage

```r
## S3 method for class 'facet_trelliscope'
print(x, ...)
```

Arguments
- x: plot object
- ...: ignored

set_labels
Set labels for a data frame

Description
Set labels for a data frame

Usage

```r
set_labels(dat, label_list)
```

Arguments
- dat: a data frame to apply labels to
- label_list: a named list with names matching those of dat and values being labels

Value
data frame with labels attached as attributes (attached to each column and named "label")
sort_spec  
Specify how a display should be sorted

Description

Specify how a display should be sorted

Usage

sort_spec(name, dir = "asc")

Arguments

- name: variable name to sort on
- dir: direction to sort (‘asc’ or ‘desc’)

---

trelliscope  
Create a Trelliscope Display

Description

Create a Trelliscope Display

Usage

trelliscope(
    x,
    name,
    group = "common",
    panel_col = NULL,
    desc = "",
    md_desc = "",
    path,
    height = 500,
    width = 500,
    auto_cog = FALSE,
    state = NULL,
    nrow = 1,
    ncol = 1,
    jsonp = TRUE,
    split_sig = NULL,
    self_contained = FALSE,
    thumb = FALSE
)
Arguments

- **x**: an object to create a trelliscope display for
- **name**: name of the display
- **group**: group that the display belongs to
- **panel_col**: optional string specifying the column to use for panels (if there are multiple plot columns in x)
- **desc**: optional text description of the display
- **md_desc**: optional string of markdown that will be shown in the viewer for additional context about the display
- **path**: the base directory of the trelliscope application
- **height**: height in pixels of each panel
- **width**: width in pixels of each panel
- **auto_cog**: should auto cogs be computed (if possible)?
- **state**: the initial state the display will open in
- **nrow**: the number of rows of panels to display by default
- **ncol**: the number of columns of panels to display by default
- **jsonp**: should json for display object be jsonp (TRUE) or json (FALSE)?
- **split_sig**: optional string that specifies the "signature" of the data splitting. If not specified, this is calculated as the md5 hash of the sorted unique facet variables. This is used to identify "related displays" - different displays that are based on the same faceting scheme. This parameter should only be specified manually if a display’s faceting is mostly similar to another display’s.
- **self_contained**: should the Trelliscope display be a self-contained html document? (see note)
- **thumb**: should a thumbnail be created?

Note

Note that **self_contained** is severely limiting and should only be used in cases where you would either like your display to show up in the RStudio viewer pane, in an interactive R Markdown Notebook, or in a self-contained R Markdown html document.

Examples

```r
## Not run:
library(dplyr)
library(tidyr)
library(purrr)
library(plotly)
library(ggplot2)

# tidyverse + plotly
d <- mpg %>%
  nest(data = !one_of(c("manufacturer", "class"))) %>%
  mutate(
```
mean_city_mpg = map_dbl(data, ~ mean(.$.cty)),
panel = map_plot(data, function(x) {
    plot_ly(data = x, x = ~cty, y = ~hwy,
    type = "scatter", mode = "markers")
})

# set default layout
d %>% trelliscope(name = "city_vs_highway_mpg")

# set default layout
d %>% trelliscope(name = "city_vs_highway_mpg", nrow = 2, ncol = 3)

# set the output path for where files will be stored
my_displays <- tempfile()
d %>% trelliscope(name = "city_vs_highway_mpg", path = my_displays)

# multiple displays can be added to the same path and all will be available in the viewer
d %>% trelliscope(name = "city_vs_highway_mpg2", path = my_displays)

# ordering the data frame will set default sort order of the display
d %>%
    arrange(-mean_city_mpg) %>%
    trelliscope(name = "city_vs_highway_mpg")

# tidyverse + ggplot2
mpg %>%
    nest(data = !one_of(c("manufacturer", "class"))) %>%
    mutate(
        panel = map_plot(data, ~
            qplot(cty, hwy, data = .) + xlab("cty") + ylab("hwy") +
            xlim(7, 37) + ylim(9, 47) + theme_bw()) %>%
    trelliscope(name = "tidy_gg")

# computing additional cognostics
mpg_cog <- mpg %>%
    nest(data = !one_of(c("manufacturer", "class"))) %>%
    mutate(
        cogs = map_cog(data, ~ tibble(
            mean_city_mpg = mean(.$.cty),
            mean_hwy_mpg = mean(.$.hwy),
            most_common_drv = tail(names(table(.$.drv)), 1)
        ))

# computing additional cognostics explicitly using cog()
# so we can specify descriptions, etc.
mpg_cog2 <- mpg %>%
    nest(data = !one_of(c("manufacturer", "class"))) %>%
    mutate(
        cogs = map_cog(data, ~ tibble(
            mean_city_mpg = cog(mean(.$.cty), desc = "Mean city mpg"),
            mean_hwy_mpg = cog(mean(.$.hwy), desc = "Mean highway mpg"),
            most_common_drv = cog(tail(names(table(.$.drv)), 1), desc = "Most common drive type")
        ))
```r
panel = map_plot(data, function(x) {
    plot_ly(data = x, x = ~cty, y = ~hwy,
    type = "scatter", mode = "markers") %>%
    layout(
        xaxis = list(range = c(9, 47)),
        yaxis = list(range = c(7, 37))
    )
})

mpg_cog2 %>%
trelliscope(name = "city_vs_highway_mpg", nrow = 1, ncol = 2)

## End(Not run)
```

---

**Trelliscope-shiny**  
*Shiny bindings for Trelliscope*

### Description
Output and render functions for using trelliscopewidget within Shiny applications and interactive Rmd documents.

### Usage

- `trelliscopeOutput(outputId, width = "100\%", height = "400px")`
- `renderTrelliscope(expr, env = parent.frame(), quoted = FALSE)`

### Arguments

- `outputId`  
  output variable to read from

- `width, height`  
  Must be a valid CSS unit (like '100\%', '400px', 'auto') or a number, which will be coerced to a string and have 'px' appended.

- `expr`  
  An expression that generates a trelliscopewidget

- `env`  
  The environment in which to evaluate expr.

- `quoted`  
  Is expr a quoted expression (with `quote()`)? This is useful if you want to save an expression in a variable.
update_display_list  
*Update Trelliscope app display list file*

**Description**

Update Trelliscope app display list file

**Usage**

```
update_display_list(base_path, jsonp = TRUE)
```

**Arguments**

- `base_path`  
  the base directory of the trelliscope application
- `jsonp`  
  should json for display list be jsonp (TRUE) or json (FALSE)?

write_cognostics  
*Write cognostics data for a display in a Trelliscope app*

**Description**

Write cognostics data for a display in a Trelliscope app

**Usage**

```
write_cognostics(cogdf, base_path, id, name, group = "common", jsonp = TRUE)
```

**Arguments**

- `cogdf`  
  a data frame of cognostics, prepared with `as_cognostics`
- `base_path`  
  the base directory of the trelliscope application
- `id`  
  a unique id for the application
- `name`  
  name of the display
- `group`  
  group that the display belongs to
- `jsonp`  
  should json for cognostics be jsonp (TRUE) or json (FALSE)?
write_config

Write Trelliscope app configuration file

Description

Write Trelliscope app configuration file

Usage

```r
write_config(
base_path,
id,
split_layout = FALSE,
has_legend = FALSE
)
```

Arguments

- `base_path`: the base directory of the trelliscope application
- `id`: a unique id for the application
- `self_contained`: should the Trelliscope display be a self-contained html document?
- `jsonp`: should json for app config be jsonp (TRUE) or json (FALSE)?
- `split_layout`: boolean that determines if the layout is split into components like a facet_grid vs. individual panels like facet_wrap. Only applies to ggplot2 plot objects.
- `has_legend`: should a legend be reported for split_layout

write_display_obj

Write a "display object" file for a Trelliscope app

Description

Write a "display object" file for a Trelliscope app

Usage

```r
write_display_obj(
cogdf,
panel_example,
base_path,
id,
name,
group = "common",
```
```
desc = "", height = 500, width = 500, md_desc = "", state = NULL, jsonp = TRUE, split_sig = NULL, panel_img_col = NULL, self_contained = FALSE, thumb = TRUE, split_layout = FALSE, split_aspect = NULL, has_legend = FALSE, pb = NULL)
```

### Arguments

- **cogdf**: a data frame of cognostics, prepared with `as_cognostics`
- **panel_example**: an example object of one panel of a display (can be trellis, ggplot2, or htmlwidget object)
- **base_path**: the base directory of the trelliscope application
- **id**: a unique id for the application
- **name**: name of the display
- **group**: group that the display belongs to
- **desc**: description of the display
- **height**: height in pixels of each panel
- **width**: width in pixels of each panel
- **md_desc**: optional string of markdown that will be shown in the viewer for additional context about the display
- **state**: the initial state the display will open in
- **jsonp**: should json for display object be jsonp (TRUE) or json (FALSE)?
- **split_sig**: optional string "signature" specifying the data splitting
- **panel_img_col**: which column (if any) is a panel image column?
- **self_contained**: should the Trelliscope display be a self-contained html document?
- **thumb**: should a thumbnail be created?
- **split_layout**: boolean that determines if the layout is split into components like a facet_grid vs. individual panels like facet_wrap. Only applies to ggplot2 plot objects.
- **split_aspect**: list indicating aspect ratios of axes for a split layout. Only applies to ggplot2 plot objects.
- **has_legend**: should a legend be reported for split_layout
- **pb**: optional progress bar object to pass in and use to report progress
write_panel

Write a plot object as a panel in a Trelliscope display

Description

Write a plot object as a panel in a Trelliscope display

Usage

write_panel(
  plot_object,
  key,
  base_path,
  name,
  group = "common",
  width,
  height,
  jsonp = TRUE,
  split_layout = FALSE
)

Arguments

plot_object a plot object to be written (can be trellis, ggplot2, or htmlwidget)
key a string identifying the panel key, which will be used as the panel file name and which the panelKey column of the cognostics data frame should point to
base_path the base directory of the trelliscope application
name name of the display that the panel belongs to
group group name of the display that the panel belongs to
width width in pixels of each panel
height height in pixels of each panel
jsonp should json for panel be jsonp (TRUE) or json (FALSE)?
split_layout boolean that determines if the layout is split into components like a facet_grid vs. individual panels like facet_wrap. Only applies to ggplot2 plot objects.
write_panels

Write a list of plot objects as panels in a Trelliscope display

Description

Write a list of plot objects as panels in a Trelliscope display

Usage

write_panels(plot_list, ..., pb = NULL)

Arguments

plot_list a named list of plot objects to be written as panels (objects can be trellis, ggplot2, or htmlwidget) with the list names being the keys for the panels

... params passed directly to write_panel

pb optional progress bar object to pass in and use to report progress
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