

Package ‘echarts4r’

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Description

Easily create interactive charts by leveraging the 'Echarts Javascript' library which includes 36 chart types, themes, 'Shiny' proxies and animations.

License Apache License (>= 2.0)

Encoding UTF-8

LazyData true

Imports htmlwidgets, magrittr, dplyr (>= 0.7.0), purrr, countrycode, d3r, broom, shiny, scales, corrplot, data.tree, htmltools, jsonlite, rstudioapi

Suggests tidyr

RoxygenNote 7.1.0.9000

URL <http://echarts4r.john-coene.com/>

BugReports <https://github.com/JohnCoene/echarts4r/issues>

NeedsCompilation no

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angle_axis	<i>Angle axis</i>
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Description

Customise angle axis.

Usage

```
e_angle_axis(e, serie, show = TRUE, ...)
e_angle_axis_(e, serie = NULL, show = TRUE, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Serie to use as axis labels.
show	Whether to display the axis.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
df <- data.frame(x = 1:100, y = seq(1, 200, by = 2))

df %>%
  e_charts(x) %>%
  e_polar(FALSE) %>%
  e_angle_axis(FALSE) %>%
  e_radius_axis(FALSE) %>%
  e_line(y, coord.system = "polar", smooth = TRUE) %>%
  e_legend(show = FALSE)

df <- data.frame(x = LETTERS[1:5], y = runif(5))
```

```
df %>%
  e_charts(x) %>%
  e_polar() %>%
  e_angle_axis(x) %>%
  e_radius_axis() %>%
  e_line(y, coord.system = "polar", smooth = TRUE)
```

band

Confidence bands

Description

Add confidence bands

Usage

```
e_band(
  e,
  min,
  max,
  stack = "confidence-band",
  symbol = c("none", "none"),
  areaStyle = list(list(color = "rgba(0,0,0,0)"), list()),
  legend = list(FALSE, FALSE),
  ...
)

e_band_(
  e,
  min,
  max,
  stack = "confidence-band",
  symbol = c("none", "none"),
  areaStyle = list(list(color = "rgba(0,0,0,0)"), list()),
  legend = list(FALSE, FALSE),
  ...
)
```

Arguments

<code>e</code>	An <code>echarts4r</code> object as returned by <code>e_charts</code> or a proxy as returned by <code>echarts4rProxy</code> .
<code>min, max</code>	series.
<code>stack</code>	Name of stack.
<code>symbol</code>	Whether to show symbols on lower and upper band lines.
<code>areaStyle</code>	The style of lower and upper bands, i.e.: color.

legend Whether to show min and max in legend.

... All options must be of vectors or lists of length 2 where the first argument is for the lower bound and the second for the upper bound, see examples.

Examples

```
df <- data.frame(
  x = 1:10,
  y = runif(10, 5, 10)
) %>%
  dplyr::mutate(
    lwr = y - runif(10, 1, 3),
    upr = y + runif(10, 2, 4)
  )

df %>%
  e_charts(x) %>%
  e_line(y) %>%
  e_band(lwr, upr)
```

callbacks

Callbacks

Description

Binds events to chart interactions.

Usage

```
e_on(e, query, handler, event = "click")
e_off(e, query, handler, event = "click")
```

Arguments

e An `echarts4r` object as returned by `e_charts` or a proxy as returned by `echarts4rProxy`.

query Condition that triggers the handler

handler JavaScript handler, passed to JS.

event Event that triggers the handler.

See Also

[official documentation](#)

Examples

```
cars %>%
  e_charts(speed) %>%
  e_scatter(dist) %>%
  e_on(
    list(seriesName = "dist"),
    "function(){alert('Serie clicked')}")
)
```

connections

Connect charts

Description

Connect charts together.

Usage

```
e_connect(e, ids)
```

```
e_group(e, group)
```

```
e_connect_group(e, group)
```

```
e_disconnect_group(e, group = NULL)
```

```
e_arrange(..., rows = NULL, cols = NULL, width = "xs", title = NULL)
```

Arguments

<code>e</code>	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
<code>ids</code>	Scalar, vector or list of ids of chart to connect with.
<code>group</code>	Group name.
<code>...</code>	Any echarts objects.
<code>rows, cols</code>	Number of rows and columns.
<code>width</code>	Wdith of columns, one of xs, md, lg.
<code>title</code>	Title of charts.

Value

`e_arrange`: in an interactive session, returns a `htmltools::browsable`, in rmarkdown returns a container (`htmltools::div`).

Functions

- `e_connect`: connects charts by ids, *cannot* be disconnected.
- `e_group`: assigns a group to chart.
- `e_connect_group`: connects chart with another group.
- `e_disconnect_group`: disconnects chart from group.
- `e_arrange`: arrange charts.

Note

`e_arrange` may not work properly in the RStudio viewer.

Examples

```
# linked datazoom
e1 <- cars %>%
  e_charts(
    speed,
    height = 200
  ) %>%
  e_scatter(dist) %>%
  e_datazoom(show = FALSE) %>%
  e_group("grp") # assign group

e2 <- cars %>%
  e_charts(
    dist,
    height = 200
  ) %>%
  e_scatter(speed) %>%
  e_datazoom() %>%
  e_group("grp") %>% # assign group
  e_connect_group("grp") # connect

if(interactive())
  e_arrange(e1, e2, title = "Linked datazoom")
```

Description

Output and render functions for using echarts4r within Shiny applications and interactive Rmd documents.

Usage

```

echarts4rOutput(outputId, width = "100%", height = "400px")

renderEcharts4r(expr, env = parent.frame(), quoted = FALSE)

echarts4rProxy(
  id,
  data,
  x,
  timeline = FALSE,
  session = shiny::getDefaultReactiveDomain(),
  reorder = TRUE
)

echarts4r_proxy(
  id,
  data,
  x,
  timeline = FALSE,
  session = shiny::getDefaultReactiveDomain(),
  reorder = TRUE
)

```

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 echarts4r
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.
id	Target chart id.
data	A data.frame.
x	Column name containing x axis.
timeline	Set to TRUE to build a timeline, see timeline section.
session	Shiny session.
reorder	Set the FALSE to not reorder numeric x axis values.

Callbacks

- id_brush: returns data on brushed data points.
- id_legend_change: returns series name of legend selected/unselected.
- id_clicked_data: returns data of clicked data point.

- `id_clicked_data_value`: returns value of clicked data point.
- `id_clicked_row`: returns row number of clicked data point.
- `id_clicked_serie`: returns name of serie of clicked data point.
- `id_mouseover_data`: returns data on hovered data point.
- `id_mouseover_data_value`: returns value of hovered data point.
- `id_mouseover_row`: returns row o hovered data point.
- `id_mouseover_serie`: returns name of serie of hovered data point.

Proxies

The `echarts4rProxy` function returns a proxy for chart which allows manipulating a drawn chart, adding data, adding or removing series, etc. without redrawing the entire chart.

- `e_append1_p` & `e_append2_p`
- `e_showtip_p` & `e_hidetip_p`
- `e_highlight_p` & `e_downplay_p`
- `e_focus_adjacency` & `e_unfocus_adjacency`
- `e_dispatch_action_p`
- `e_execute`
- `e_remove_serie_p`

e_add

Add nested data

Description

Utility function to add data where the original JavaScript library expects nested data.

Usage

```
e_add(e, param, ...)
```

Arguments

<code>e</code>	An <code>echarts4r</code> object as returned by <code>e_charts</code> or a proxy as returned by <code>echarts4rProxy</code> .
<code>param</code>	The nested parameter to add data to.
<code>...</code>	Any other option to pass, check See Also section.

Details

For instance, `e_funnel` lets you pass values and labels (from your initial `data.frame`) which corresponds to name and value in the **original library**. However the latter also takes, `label`, `itemStyle`, and `emphasis` but being JSON arrays they translate to lists in R and dealing with nested `data.frames` is not ideal. `e_add` remedies to that. It allows adding those nested data points, see the examples below.

Examples

```

# funnel can take nested itemStyle
# https://echarts.apache.org/en/option.html#series-funnel.data
funnel <- data.frame(
  stage = c("View", "Click", "Purchase"),
  value = c(80, 30, 20),
  color = c("blue", "red", "green")
)

funnel %>%
  e_charts() %>%
  e_funnel(value, stage) %>%
  e_add("itemStyle", color)

# Heatmap can take nested label
# https://echarts.apache.org/en/option.html#series-heatmap.data
v <- LETTERS[1:10]
matrix <- data.frame(
  x = sample(v, 300, replace = TRUE),
  y = sample(v, 300, replace = TRUE),
  z = rnorm(300, 10, 1),
  stringsAsFactors = FALSE
) %>%
  dplyr::group_by(x, y) %>%
  dplyr::summarise(z = sum(z)) %>%
  dplyr::ungroup() %>%
  dplyr::mutate(
    show = TRUE,
    fontStyle = round(runif(dplyr::n(), 5, 12))
  )

matrix %>%
  e_charts(x) %>%
  e_heatmap(y, z) %>%
  e_visual_map(z) %>%
  e_add(
    "label",
    show,
    fontStyle
  )

```

e_animation

Animation

Description

Customise animations.

Usage

```
e_animation(
  e,
  show = TRUE,
  threshold = NULL,
  duration = NULL,
  easing = NULL,
  delay = NULL,
  duration.update = NULL,
  easing.update = NULL,
  delay.update = NULL
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
show	Set to show animation.
threshold	Whether to set graphic number threshold to animation. Animation will be disabled when graphic number is larger than threshold.
duration	Duration of the first animation.
easing	Easing method used for the first animation.
delay	Delay before updating the first animation.
duration.update	Time for animation to complete.
easing.update	Easing method used for animation.
delay.update	Delay before updating animation.

See Also

[Additional arguments](#)

Examples

```
mtcars %>%
  e_charts(mpg) %>%
  e_area(drat) %>%
  e_animation(duration = 10000)
```

e_append1_p

Append Proxy

Description

Append data dynamically.

Usage

```
e_append1_p(proxy, series_index = NULL, data, x, y)
```

```
e_append1_p_(proxy, series_index = NULL, data, x, y)
```

```
e_append2_p(
  proxy,
  series_index = NULL,
  data,
  x,
  y,
  z,
  scale = NULL,
  symbol_size = 1
)
```

```
e_append2_p_(
  proxy,
  series_index = NULL,
  data,
  x,
  y,
  z,
  scale = NULL,
  symbol_size = 1
)
```

Arguments

proxy	An echarts4r proxy as returned by echarts4rProxy .
series_index	Index of serie to append to (starts from 0).
data	Data.frame containing data to append.
x, y, z	Columns names to plot.
scale	A scaling function as passed to e_scatter .
symbol_size	Multiplier of scaling function as in e_scatter .

Details

Currently not all types of series supported incremental rendering when using `appendData`. Only these types of series support it: `e_scatter` and `e_line` of pure echarts, and `e_scatter_3d`, and `e_line_3d` of echarts-gl.

Examples

```
## Not run:
library(shiny)

ui <- fluidPage(
  actionButton("add", "Add Data to y"),
  echarts4rOutput("plot"),
  h4("Brush"),
  verbatimTextOutput("selected"),
  h4("Legend select change"),
  verbatimTextOutput("legend")
)

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

  data <- data.frame(x = rnorm(10, 5, 3), y = rnorm(10, 50, 12), z = rnorm(10, 5, 20))

  react <- eventReactive(input$add, {
    set.seed(sample(1:1000, 1))
    data.frame(x = rnorm(10, 5, 2), y = rnorm(10, 50, 10), z = rnorm(10, 5, 20))
  })

  output$plot <- renderEcharts4r({
    data %>%
      e_charts(x) %>%
      e_scatter(y, z, scale = NULL) %>%
      e_scatter(z) %>%
      e_brush()
  })

  observeEvent(input$add, {
    echarts4rProxy("plot") %>%
      e_append2_p(0, react(), x, y, z)
  })

  output$selected <- renderPrint({
    input$plot_brush
  })

  output$legend <- renderPrint({
    input$plot_legend_change
  })
}

shinyApp(ui, server)
```

```
## End(Not run)
```

e_area	<i>Area</i>
--------	-------------

Description

Add area serie.

Usage

```
e_area(
  e,
  serie,
  bind,
  name = NULL,
  legend = TRUE,
  y_index = 0,
  x_index = 0,
  coord_system = "cartesian2d",
  ...
)
```

```
e_area_(
  e,
  serie,
  bind = NULL,
  name = NULL,
  legend = TRUE,
  y_index = 0,
  x_index = 0,
  coord_system = "cartesian2d",
  ...
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to plot.
bind	Binding between datasets, namely for use of e_brush .
name	name of the serie.
legend	Whether to add serie to legend.
y_index	Indexes of x and y axis.

x_index	Indexes of x and y axis.
coord_system	Coordinate system to plot against.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
C02 %>%
  group_by(Plant) %>%
  e_charts(conc) %>%
  e_area(uptake) %>%
  e_tooltip(trigger = "axis")

# timeline
iris %>%
  group_by(Species) %>%
  e_charts(Sepal.Length, timeline = TRUE) %>%
  e_area(Sepal.Width) %>%
  e_tooltip(trigger = "axis")
```

e_aria

Aria

Description

W3C defined the Accessible Rich Internet Applications Suite (WAI-ARIA) to make Web content and Web applications more accessible to the disabled. From ECharts 4.0, echarts4r supports ARIA by generating description for charts automatically.

Usage

```
e_aria(e, show = TRUE, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
show	Whether to show aria helper text.
...	Any other option to pass, check See Also section.

Details

There should be an aria-label attribute on the chart DOM, which can help the disabled understand the content of charts with the help of certain devices.

See Also

[official documentation](#)

e_axis

Axis

Description

Customise axis.

Usage

```
e_axis(  
  e,  
  serie,  
  axis = c("x", "y", "z"),  
  index = 0,  
  formatter = NULL,  
  margin = 0,  
  ...  
)
```

```
e_axis_(  
  e,  
  serie = NULL,  
  axis = c("x", "y", "z"),  
  index = 0,  
  formatter = NULL,  
  margin = 0,  
  ...  
)
```

```
e_x_axis_(e, serie = NULL, index = 0, formatter = NULL, margin = 0, ...)
```

```
e_y_axis_(e, serie = NULL, index = 0, formatter = NULL, margin = 0, ...)
```

```
e_z_axis_(e, serie = NULL, index = 0, margin = 0, ...)
```

```
e_x_axis(e, serie, index = 0, formatter = NULL, margin = 0, ...)
```

```
e_y_axis(e, serie, index = 0, formatter = NULL, margin = 0, ...)
```

```
e_z_axis(e, serie, index = 0, margin = 0, ...)
```

```
e_rm_axis(e, axis = c("x", "y", "z"))
```

```
e_axis_formatter(  
  e,  
  serie,  
  axis = c("x", "y", "z"),  
  index = 0,  
  formatter = NULL,  
  margin = 0,  
  ...  
)
```

```

    style = c("decimal", "percent", "currency"),
    digits = 0,
    locale = NULL,
    currency = "USD"
  )

```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to range the axis. If used the range of the serie is used as, min an max.
axis	Axis to customise.
index	Index of axis to customise.
formatter	An axis formatter as returned by e_axis_formatter .
margin	Margin to apply to serie: $min = serie - margin$ and $max = serie + margin$
...	Any other option to pass, check See Also section.
style	Formatter style, one of decimal, percent, or currency.
digits	Number of decimals.
locale	Locale, if NULL then it is inferred from <code>Sys.getlocale</code> .
currency	Currency to to display.

Details

The `e_axis_formatter` may not work in RStudio, open the plot in your browser. It will display just fine in Rmarkdown and Shiny.

Functions

- `e_axis` to customise axis
- `e_rm_axis` to remove axis

See Also

[Additional x arguments](#), [Additional y arguments](#)

Examples

```

# range axis based on serie
cars %>%
  e_charts(speed) %>%
  e_line(dist) %>%
  e_x_axis(speed) %>%
  e_y_axis(dist)

# use formatter
cars %>%
  dplyr::mutate(

```

```

    speed = speed / 25
  ) %>%
  e_charts(speed) %>%
  e_scatter(dist) %>%
  e_y_axis(
    formatter = e_axis_formatter("currency")
  ) %>%
  e_x_axis(
    formatter = e_axis_formatter("percent", digits = 0)
  )

# plot all labels & rotate
USArrests %>%
  head(10) %>%
  dplyr::mutate(State = row.names(.)) %>%
  e_charts(State) %>%
  e_area(Murder) %>%
  e_x_axis(axisLabel = list(interval = 0, rotate = 45)) # rotate

```

e_axis_3d

Axis 3D

Description

Customise 3D axis.

Usage

```
e_axis_3d(e, axis = c("x", "y", "z"), index = 0, ...)
```

```
e_x_axis_3d(e, index = 0, ...)
```

```
e_y_axis_3d(e, index = 0, ...)
```

```
e_z_axis_3d(e, index = 0, ...)
```

Arguments

e	An echarts4r object as returned by <code>e_charts</code> or a proxy as returned by <code>echarts4rProxy</code> .
axis	Axis to customise.
index	Index of axis to customise.
...	Any other option to pass, check See Also section.

See Also

[Additional x arguments](#), [Additional y arguments](#), [Additional z arguments](#)

Examples

```

# phony data
v <- LETTERS[1:10]
matrix <- data.frame(
  x = sample(v, 300, replace = TRUE),
  y = sample(v, 300, replace = TRUE),
  z1 = rnorm(300, 10, 1),
  z2 = rnorm(300, 10, 1),
  stringsAsFactors = FALSE
) %>%
  dplyr::group_by(x, y) %>%
  dplyr::summarise(
    z1 = sum(z1),
    z2 = sum(z2)
  ) %>%
  dplyr::ungroup()

trans <- list(opacity = 0.4) # transparency
emphasis <- list(itemStyle = list(color = "#313695"))

matrix %>%
  e_charts(x) %>%
  e_bar_3d(y, z1, stack = "stack", name = "Serie 1", itemStyle = trans, emphasis = emphasis) %>%
  e_bar_3d(y, z2, stack = "stack", name = "Serie 2", itemStyle = trans, emphasis = emphasis) %>%
  e_x_axis_3d(axisLine = list(lineStyle = list(color = "blue")))

```

`e_axis_labels`*Axis Labels*

Description

Convenience function to add axis labels.

Usage

```
e_axis_labels(e, x = "", y = "")
```

Arguments

`e` An echarts4r object as returned by `e_charts` or a proxy as returned by `echarts4rProxy`.

`x, y` Labels of axes.

Examples

```

cars %>%
  e_charts(speed) %>%
  e_scatter(dist) %>%
  e_axis_labels(

```

```
x = "speed",
y = "distance"
)
```

e_axis_pointer	<i>Axis pointer</i>
----------------	---------------------

Description

Customise axis pointer.

Usage

```
e_axis_pointer(e, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

e_axis_stagger	<i>Stagger Axis Labels</i>
----------------	----------------------------

Description

Stagger axis labels.

Usage

```
e_axis_stagger(e)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
---	--

Examples

```
df <- data.frame(  
  x = c("a very long label", "Another long label"),  
  y = 1:2  
)  
  
df %>%  
  e_charts(x, width = 150) %>%  
  e_bar(y) %>%  
  e_axis_stagger()
```

e_bar

Bar and Line chart

Description

Add bar serie.

Usage

```
e_bar(  
  e,  
  serie,  
  bind,  
  name = NULL,  
  legend = TRUE,  
  y_index = 0,  
  x_index = 0,  
  coord_system = "cartesian2d",  
  ...  
)  
  
e_bar_(  
  e,  
  serie,  
  bind = NULL,  
  name = NULL,  
  legend = TRUE,  
  y_index = 0,  
  x_index = 0,  
  coord_system = "cartesian2d",  
  ...  
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to plot.
bind	Binding between datasets, namely for use of e_brush .
name	name of the serie.
legend	Whether to add serie to legend.
x_index, y_index	Indexes of x and y axis.
coord_system	Coordinate system to plot against.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
library(dplyr)

mtcars %>%
  mutate(
    model = row.names(.),
    total = mpg + qsec
  ) %>%
  arrange(desc(total)) %>%
  e_charts(model) %>%
  e_bar(mpg, stack = "grp") %>%
  e_bar(qsec, stack = "grp")
```

e_bar_3d

Bar 3D

Description

Add 3D bars

Usage

```
e_bar_3d(
  e,
  y,
  z,
  bind,
  coord_system = "cartesian3D",
  name = NULL,
```

```

    rm_x = TRUE,
    rm_y = TRUE,
    ...
  )

  e_bar_3d(
    e,
    y,
    z,
    bind = NULL,
    coord_system = "cartesian3D",
    name = NULL,
    rm_x = TRUE,
    rm_y = TRUE,
    ...
  )

```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
y, z	Coordinates.
bind	Binding.
coord_system	Coordinate system to use, one of cartesian3D, geo3D, globe.
name	name of the serie.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```

## Not run:
# volcano
volcano %>%
  as.table() %>%
  as.data.frame() %>%
  dplyr::mutate(
    Var1 = as.integer(Var1),
    Var2 = as.integer(Var2)
  ) %>%
  e_charts(Var1) %>%
  e_bar_3d(Var2, Freq) %>%
  e_visual_map(Freq)

url <- paste0("https://ecomfe.github.io/echarts-examples/",
              "public/data-gl/asset/data/population.json")
data <- jsonlite::fromJSON(url)

```



```

data <- as.data.frame(data)
names(data) <- c("lon", "lat", "value")

# globe
data %>%
  e_charts(lon) %>%
  e_globe() %>%
  e_bar_3d(lat, value, coord_system = "globe") %>%
  e_visual_map()

# get3d
data %>%
  e_charts(lon) %>%
  e_geo_3d() %>%
  e_bar_3d(lat, value, coord_system = "geo3D") %>%
  e_visual_map()

# stacked
v <- LETTERS[1:10]
matrix <- data.frame(
  x = sample(v, 300, replace = TRUE),
  y = sample(v, 300, replace = TRUE),
  z1 = rnorm(300, 10, 1),
  z2 = rnorm(300, 10, 1),
  stringsAsFactors = FALSE
) %>%
  dplyr::group_by(x, y) %>%
  dplyr::summarise(
    z1 = sum(z1),
    z2 = sum(z2)
  ) %>%
  dplyr::ungroup()

trans <- list(opacity = 0.4) # transparency
emphasis <- list(itemStyle = list(color = "#313695"))

matrix %>%
  e_charts(x) %>%
  e_bar_3d(y, z1, stack = "stack", name = "Serie 1", itemStyle = trans, emphasis = emphasis) %>%
  e_bar_3d(y, z2, stack = "stack", name = "Serie 2", itemStyle = trans, emphasis = emphasis) %>%
  e_legend()

# timeline
matrix %>%
  group_by(x) %>%
  e_charts(y, timeline = TRUE) %>%
  e_bar_3d(z1, z2) %>%
  e_visual_map(z2)

## End(Not run)

```

`e_boxplot`*Boxplot*

Description

Draw boxplot.

Usage

```
e_boxplot(e, serie, name = NULL, outliers = TRUE, ...)
```

```
e_boxplot_(e, serie, name = NULL, outliers = TRUE, ...)
```

Arguments

<code>e</code>	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
<code>serie</code>	Column name of serie to plot.
<code>name</code>	name of the serie.
<code>outliers</code>	Whether to plot outliers.
<code>...</code>	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
df <- data.frame(
  x = c(1:10, 25),
  y = c(1:10, -6)
)

df %>%
  e_charts() %>%
  e_boxplot(y, outliers = TRUE) %>%
  e_boxplot(x, outliers = TRUE)
```

e_brush	<i>Brush</i>
---------	--------------

Description

Add a brush.

Usage

```
e_brush(e, x_index = NULL, y_index = NULL, brush_link = "all", ...)
```

Arguments

e	An echarts4r object as returned by <code>e_charts</code> or a proxy as returned by <code>echarts4rProxy</code> .
x_index	Indexes of x and y axis.
y_index	Indexes of x and y axis.
brush_link	Links interaction between selected items in different series.
...	Any other option to pass, check See Also section.

brush_link

\$

- c(3, 4, 5), for interacting series with seriesIndex as 3, 4, or 5.
- all, for interacting all series.
- none for disabling.

See Also

[Additional arguments](#)

Examples

```
quakes %>%
  e_charts(long) %>%
  e_geo(
    boundingCoords = list(
      c(190, -10),
      c(180, -40)
    )
  ) %>%
  e_scatter(lat, mag, stations, coord.system = "geo", name = "mag") %>%
  e_data(quakes, depth) %>%
  e_scatter(mag, mag, stations, name = "mag & depth") %>%
  e_grid(right = 40, top = 100, width = "30%") %>%
  e_y_axis(type = "value", name = "depth", min = 3.5) %>%
  e_brush() %>%
  e_theme("dark")
```

e_button	<i>Button</i>
----------	---------------

Description

Add a button to your visualisation.

Usage

```
e_button(e, id, ..., position = "top", tag = htmltools::tags$button)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
id	A valid CSS id.
...	Content of the button, compliant with <code>htmltools</code> .
position	Position of button, top or bottom.
tag	A Valid <code>htmltools::tags</code> function.

Examples

```
iris %>%
  group_by(Species) %>%
  e_charts(Sepal.Length) %>%
  e_line(Sepal.Width) %>%
  e_line(Petal.Length) %>%
  e_highlight(series_name = "setosa", btn = "myBtn") %>%
  e_button("myBtn", "highlight stuff")
```

e_calendar	<i>Calendar</i>
------------	-----------------

Description

Calendar

Usage

```
e_calendar(e, range, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
range	Range of calendar format, string or vector.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
# year
mtcars %>%
  e_charts() %>%
  e_calendar(range = "2017")

# month
mtcars %>%
  e_charts() %>%
  e_calendar(range = "2018-01")

# range
mtcars %>%
  e_charts() %>%
  e_calendar(range = c("2018-01", "2018-07"))
```

e_candle

Candlestick

Description

Add a candlestick chart.

Usage

```
e_candle(e, opening, closing, low, high, bind, name = NULL, legend = TRUE, ...)
```

```
e_candle_(
  e,
  opening,
  closing,
  low,
  high,
  bind = NULL,
  name = NULL,
  legend = TRUE,
  ...
)
```

Arguments

e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).

opening, closing, low, high	Stock prices.
bind	Binding between datasets, namely for use of e_brush .
name	name of the serie.
legend	Whether to add serie to legend.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
date <- c("2017-01-01", "2017-01-02", "2017-01-03", "2017-01-04", "2017-03-05",
         "2017-01-06", "2017-01-07")

stock <- data.frame(
  date = date,
  opening = c(200.60, 200.22, 198.43, 199.05, 203.54, 203.40, 208.34),
  closing = c(200.72, 198.85, 199.05, 203.73, 204.08, 208.11, 211.88),
  low = c(197.82, 198.07, 197.90, 198.10, 202.00, 201.50, 207.60),
  high = c(203.32, 200.67, 200.00, 203.95, 204.90, 208.44, 213.17)
)

stock %>%
  e_charts(date) %>%
  e_candle(opening, closing, low, high) %>%
  e_y_axis(min = 190, max = 220)
```

e_capture

Capture event

Description

Add an event capture.

Usage

```
e_capture(e, event)
```

Arguments

e	An <code>echarts4r</code> object as returned by e_charts or a proxy as returned by echarts4rProxy .
event	An event name from the event documentation .

Details

Many events can be captured, however not all are integrated, you can pass one that is not implemented with this function.

Examples

```
## Not run:
# add datazoom
library(shiny)

ui <- fluidPage(
  echarts4rOutput("chart"),
  verbatimTextOutput("zoom")
)

server <- function(input, output){
  output$chart <- renderEcharts4r({
    mtcars %>%
      e_charts(mpg) %>%
      e_scatter(qsec) %>%
      e_datazoom() %>%
      e_capture("datazoom")
  })

  output$zoom <- renderPrint({
    input$chart_datazoom
  })
}

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

## End(Not run)
```

e_cloud

Wordcloud

Description

Draw a wordcloud.

Usage

```
e_cloud(e, word, freq, color, rm_x = TRUE, rm_y = TRUE, ...)
```

```
e_cloud_(e, word, freq, color = NULL, rm_x = TRUE, rm_y = TRUE, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
word, freq	Terms and their frequencies.
color	Word color.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

See Also

[official documentation](#)

Examples

```
words <- function(n = 5000) {
  a <- do.call(paste0, replicate(5, sample(LETTERS, n, TRUE), FALSE))
  paste0(a, sprintf("%04d", sample(9999, n, TRUE)), sample(LETTERS, n, TRUE))
}

tf <- data.frame(terms = words(100),
  freq = rnorm(100, 55, 10)) %>%
  dplyr::arrange(-freq)

tf %>%
  e_color_range(freq, color) %>%
  e_charts() %>%
  e_cloud(terms, freq, color, shape = "circle", sizeRange = c(3, 15))
```

e_color

Color

Description

Customise chart and background colors.

Usage

```
e_color(e, color = NULL, background = NULL)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
color	Vector of colors.
background	Background color.

See Also

[e_theme](#), [Official color documentation](#), [Official background documentation](#)

Examples

```
mtcars %>%
  e_charts(drat) %>%
  e_line(mpg) %>%
  e_area(qsec) %>%
  e_color(
    c("red", "blue"),
    "#d3d3d3"
  )
```

e_color_range	<i>Color range</i>
---------------	--------------------

Description

Build manual color range

Usage

```
e_color_range(
  data,
  input,
  output,
  colors = c("#bf444c", "#d88273", "#f6efa6"),
  ...
)

e_color_range_(
  data,
  input,
  output,
  colors = c("#bf444c", "#d88273", "#f6efa6"),
  ...
)
```

Arguments

data	Data.frame in which to find column names.
input, output	Input and output columns.
colors	Colors to pass to colorRampPalette .
...	Any other argument to pass to colorRampPalette .

Examples

```
df <- data.frame(val = 1:10)

e_color_range(df, val, colors)
```

e_common

General options

Description

General options

Usage

```
e_common(font_family = NULL, theme = NULL)
```

Arguments

font_family	Font family.
theme	A theme.

e_correlations

Correlation

Description

Correlation

Usage

```
e_correlations(e, order = NULL, visual_map = TRUE, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
order	Ordering method, passed to corrMatOrder .
visual_map	Whether to add the visual map.
...	Any argument to pass to e_heatmap and e_visual_map .

Examples

```
cor(mtcars) %>%
  e_charts() %>%
  e_correlations(
    order = "hclust",
    visual_map = FALSE
  ) %>%
  e_visual_map(
    min = -1,
    max = 1
  )
```

e_country_names	<i>Country names</i>
-----------------	----------------------

Description

Convert country names to echarts format.

Usage

```
e_country_names(data, input, output, type = "iso2c", ...)
```

```
e_country_names_(data, input, output = NULL, type = "iso2c", ...)
```

Arguments

data	Data.frame in which to find column names.
input, output	Input and output columns.
type	Passed to countrycode origin parameter.
...	Any other parameter to pass to countrycode .

Details

Taiwan and Hong Kong cannot be plotted.

Examples

```
cns <- data.frame(country = c("US", "BE"))

# replace
e_country_names(cns, country)

# specify output
e_country_names(cns, country, country.name)
```

e_datazoom	<i>Data zoom</i>
------------	------------------

Description

Add data zoom.

Usage

```
e_datazoom(e, x_index = NULL, y_index = NULL, toolbox = TRUE, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
x_index	Indexes of x and y axis.
y_index	Indexes of x and y axis.
toolbox	Whether to add the toolbox, e_toolbox_feature , (e_toolbox_feature (e, "dataZoom")).
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
USArrests %>%
  e_charts(UrbanPop) %>%
  e_line(Assault) %>%
  e_area(Murder, y_index = 1, x_index = 1) %>%
  e_y_axis(gridIndex = 1) %>%
  e_x_axis(gridIndex = 1) %>%
  e_grid(height = "35%") %>%
  e_grid(height = "35%", top = "50%") %>%
  e_toolbox_feature("dataZoom", title = list(zoom = "zoom", back = "back")) %>%
  e_datazoom(x_index = c(0, 1))
```

e_dispatch_action_p *Dispatch Action*

Description

Create your own proxies, essentially a wrapper around the [action API](#).

Usage

```
e_dispatch_action_p(proxy, type, ...)
```

Arguments

proxy	An echarts4r proxy as returned by echarts4rProxy .
type	Type of action to dispatch, i.e.: highlight.
...	Named options.

Examples

```
## Not run:

library(shiny)

ui <- fluidPage(
  fluidRow(
    column(8, echarts4rOutput("chart")),
    column(4, actionButton("zoom", "Zoom"))
  )
)

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

  output$chart <- renderEcharts4r({
    cars %>%
      e_charts(speed) %>%
      e_scatter(dist) %>%
      e_datazoom()
  })

  observe({
    req(input$zoom)

    echarts4rProxy("chart") %>%
      e_dispatch_action_p("dataZoom", startValue = 1, endValue = 10)
  })

}

if(interactive())
```

```

shinyApp(ui, server)

## End(Not run)

```

e_draft	<i>Draft</i>
---------	--------------

Description

Add a draft watermark to your graph.

Usage

```
e_draft(e, text = "DRAFT", size = "120px", opacity = 0.4, color = "#d3d3d3")
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
text	Text to display.
size	Font size of text.
opacity, color	Opacity and color of text.

Examples

```

cars %>%
  e_charts(speed) %>%
  e_scatter(dist) %>%
  e_draft()

```

e_draw_p	<i>Draw</i>
----------	-------------

Description

Draw the chart.

Usage

```
e_draw_p(proxy)
```

Arguments

proxy	An echarts4r proxy as returned by echarts4rProxy .
-------	--

Details

Useful if you set draw to FALSE in [e_charts](#).

Examples

```
## Not run:
library(shiny)

ui <- fluidPage(
  echarts4rOutput("chart"),
  actionButton("draw", "draw")
)

server <- function(input, output){
  output$chart <- renderEcharts4r({
    mtcars %>%
      e_charts(mpg, draw = FALSE) %>%
      e_scatter(qsec) %>%
      e_datazoom()
  })

  observeEvent(input$draw, {
    echarts4rProxy("chart") %>%
      e_draw_p()
  })
}

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

## End(Not run)
```

e_error_bar

Error bar

Description

Add error bars.

Usage

```
e_error_bar(
  e,
  lower,
  upper,
  name = NULL,
  legend = TRUE,
  y_index = 0,
```

```

    x_index = 0,
    coord_system = "cartesian2d",
    ...
)

e_error_bar_(
  e,
  lower,
  upper,
  name = NULL,
  legend = TRUE,
  y_index = 0,
  x_index = 0,
  coord_system = "cartesian2d",
  ...
)

```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
lower, upper	Lower and upper error bands.
name	name of the serie.
legend	Whether to add serie to legend.
y_index	Indexes of x and y axis.
x_index	Indexes of x and y axis.
coord_system	Coordinate system to plot against.
...	Any other option to pass, check See Also section.

Examples

```

df <- data.frame(
  x = factor(c(1, 2)),
  y = c(1, 5),
  upper = c(1.1, 5.3),
  lower = c(0.8, 4.6)
)

df %>%
  e_charts(x) %>%
  e_bar(y) %>%
  e_error_bar(lower, upper)

# timeline
df <- data.frame(
  x = factor(c(1, 1, 2, 2)),
  y = c(1, 5, 3, 4),
  step = factor(c(1, 2, 1, 2)),
  upper = c(1.1, 5.3, 3.3, 4.2),

```



```

    lower = c(0.8, 4.6, 2.4, 3.6)
  )

df %>%
  group_by(step) %>%
  e_charts(x, timeline = TRUE) %>%
  e_bar(y) %>%
  e_error_bar(lower, upper)

```

e_execute

Send

Description

Send new series to chart.

Usage

```
e_execute(proxy)
```

```
e_execute_p(proxy)
```

Arguments

proxy An echarts4r proxy as returned by [echarts4rProxy](#).

e_facet

Facet

Description

Create facets for multiple plots.

Usage

```
e_facet(e, rows = 1, cols = 1)
```

Arguments

e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).

rows, cols Number of rows and columns.

Details

Each serie, i.e.: [e_bar](#) will be plotted against a facet.

e_flip_coords	<i>Flip coordinates</i>
---------------	-------------------------

Description

Flip cartesian 2D coordinates.

Usage

```
e_flip_coords(e)
```

Arguments

e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).

Examples

```
df <- data.frame(  
  x = LETTERS[1:5],  
  y = runif(5, 1, 5),  
  z = runif(5, 3, 10)  
)  
  
df %>%  
  e_charts(x) %>%  
  e_bar(y) %>%  
  e_line(z) -> plot  
  
plot # normal  
e_flip_coords(plot) # flip
```

e_flow_gl	<i>Flow GL</i>
-----------	----------------

Description

Flow GL

Usage

```
e_flow_gl(  
  e,  
  y,  
  sx,  
  sy,  
  color,
```

```

    name = NULL,
    coord_system = NULL,
    rm_x = TRUE,
    rm_y = TRUE,
    ...
)

e_flow_gl_(
  e,
  y,
  sx,
  sy,
  color = NULL,
  name = NULL,
  coord_system = NULL,
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)

```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
y	Vector position on the y axis.
sx, sy	Velocity in respective axis.
color	Vector color.
name	name of the serie.
coord_system	Coordinate system to use.
rm_x, rm_y	Whether to remove x and y axis, only applies if coord_system is not null.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```

# coordinates
vectors <- expand.grid(0:9, 0:9)
names(vectors) <- c("x", "y")
vectors$sx <- rnorm(100)
vectors$sy <- rnorm(100)
vectors$color <- log10(runif(100, 1, 10))

vectors %>%
  e_charts(x) %>%
  e_flow_gl(y, sx, sy, color) %>%
  e_visual_map(

```

```

min = 0, max = 1, # log 10
dimension = 4, # x = 0, y = 1, sx = 3, sy = 4
show = FALSE, # hide
inRange = list(
  color = c('#313695', '#4575b4', '#74add1', '#abd9e9', '#e0f3f8',
            '#ffffbf', '#fee090', '#fdae61', '#f46d43', '#d73027', '#a50026')
)
)%>%
e_x_axis(
  splitLine = list(show = FALSE)
)%>%
e_y_axis(
  splitLine = list(show = FALSE)
)

# map
latlong <- seq(-180, 180, by = 5)
wind = expand.grid(lng = latlong, lat = latlong)
wind$slng <- rnorm(nrow(wind), 0, 200)
wind$slat <- rnorm(nrow(wind), 0, 200)
wind$color <- abs(wind$slat) - abs(wind$slng)
rng <- range(wind$color)

trans <- list(opacity = 0.5) # transparency

wind %>%
  e_charts(lng, backgroundColor = '#333') %>%
  e_geo(
    itemStyle = list(
      normal = list(
        areaColor = "#323c48",
        borderColor = "#111"
      )
    )
  ) %>%
  e_flow_gl(lat, slng, slat, color,
    coord_system = "geo",
    itemStyle = trans,
    particleSize = 2
  ) %>%
  e_visual_map(
    min = rng[1], max = rng[2], # range
    dimension = 4, # lng = 0, lat = 1, slng = 2, slat = 3, color = 4
    show = FALSE, # hide
    inRange = list(
      color = c('#313695', '#4575b4', '#74add1', '#abd9e9', '#e0f3f8',
                '#ffffbf', '#fee090', '#fdae61', '#f46d43', '#d73027', '#a50026')
    )
  )
)

```

e_focus_adjacency_p *Node Adjacency*

Description

Focus or unfocus on node adjacency.

Usage

```
e_focus_adjacency_p(proxy, index, ...)
```

```
e_unfocus_adjacency_p(proxy, ...)
```

Arguments

proxy	An echarts4r proxy as returned by echarts4rProxy .
index	One or more node index to focus on.
...	Any other options, see official documentation and details.

Details

Must pass `seriesId`, `seriesIndex`, or `seriesName`, generally `seriesIndex = 0` will work.

Examples

```
value <- rnorm(10, 10, 2)

nodes <- data.frame(
  name = sample(LETTERS, 10),
  value = value,
  size = value,
  grp = rep(c("grp1", "grp2"), 5),
  stringsAsFactors = FALSE
)

edges <- data.frame(
  source = sample(nodes$name, 20, replace = TRUE),
  target = sample(nodes$name, 20, replace = TRUE),
  stringsAsFactors = FALSE
)

## Not run:

library(shiny)

ui <- fluidPage(
  fluidRow(
    column(
      2, numericInput("index", "Node", value = 3, min = 1, max = 9)
```

```

    ),
    column(
      2, br(), actionButton("focus", "Focus")
    ),
    column(
      2, br(), actionButton("unfocus", "Unfocus")
    )
  ),
  fluidRow(
    column(12, echarts4rOutput("graph"))
  )
)

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

  output$graph <- renderEcharts4r({
    e_charts() %>%
    e_graph() %>%
    e_graph_nodes(nodes, name, value, size, grp) %>%
    e_graph_edges(edges, source, target)
  })

  observeEvent(input$focus, {

    echarts4rProxy("graph") %>%
    e_focus_adjacency_p(
      seriesIndex = 0,
      index = input$index
    )

  })

  observeEvent(input$unfocus, {

    echarts4rProxy("graph") %>%
    e_unfocus_adjacency_p(seriesIndex = 0)

  })

}

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

## End(Not run)

```

Description

Simple formatters as helpers.

Usage

```
e_format_axis(e, axis = "y", suffix = NULL, prefix = NULL, ...)
```

```
e_format_x_axis(e, suffix = NULL, prefix = NULL, ...)
```

```
e_format_y_axis(e, suffix = NULL, prefix = NULL, ...)
```

Arguments

e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).

axis Axis to apply formatter to.

suffix, prefix Suffix and prefix of label.

... Any other arguments to pass to [e_axis](#).

Examples

```
# Y = %
df <- data.frame(
  x = 1:10,
  y = round(
    runif(10, 1, 100), 2
  )
)

df %>%
  e_charts(x) %>%
  e_line(y) %>%
  e_format_y_axis(suffix = "%") %>%
  e_format_x_axis(prefix = "A")
```

e_funnel

Funnel

Description

Add a funnel.

Usage

```
e_funnel(
  e,
  values,
  labels,
  name = NULL,
  legend = TRUE,
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)

e_funnel_(
  e,
  values,
  labels,
  name = NULL,
  legend = TRUE,
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)
```

Arguments

e	An echarts4r object as returned by <code>e_charts</code> .
values, labels	Values and labels of funnel.
name	name of the serie.
legend	Whether to add serie to legend.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass to bar or line char types.

Details

No bind argument here, with a funnel `bind = labels`.

See Also

[Additional arguments](#)

Examples

```
funnel <- data.frame(
  stage = c("View", "Click", "Purchase"),
  value = c(80, 30, 20)
)

funnel %>%
```



```
e_charts() %>%  
  e_funnel(value, stage)
```

e_gauge

Gauge

Description

Plot a gauge.

Usage

```
e_gauge(e, value, name, rm_x = TRUE, rm_y = TRUE, ...)  
e_gauge_(...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
value	Value to gauge.
name	Text on gauge.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
e_charts() %>%  
  e_gauge(57, "PERCENT")
```

e_geo

Geo

Description

Initialise geo.

Usage

```
e_geo(e, map = "world", ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
map	Map type.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
flights <- read.csv(
  paste0("https://raw.githubusercontent.com/plotly/datasets/",
        "master/2011_february_aa_flight_paths.csv")
)

flights %>%
  e_charts() %>%
  e_geo() %>%
  e_lines(
    start_lon,
    start_lat,
    end_lon,
    end_lat,
    name = "flights",
    lineStyle = list(normal = list(curveness = 0.3))
  )
```

e_geo_3d	<i>Geo 3D</i>
----------	---------------

Description

Initialise geo 3D.

Usage

```
e_geo_3d(e, serie, color, type = "world", rm_x = TRUE, rm_y = TRUE, ...)
```

```
e_geo_3d_(
  e,
  serie = NULL,
  color = NULL,
  type = "world",
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to plot.
color	Color.
type	Map type.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

See Also

[e_country_names](#), [Additional arguments](#)

Examples

```
choropleth <- data.frame(
  countries = c("France", "Brazil", "China", "Russia", "Canada", "India", "United States",
               "Argentina", "Australia"),
  height = runif(9, 1, 5),
  color = c("#F7FBFF", "#DEEBF7", "#C6DBEF", "#9ECAE1", "#6BAED6", "#4292C6",
            "#2171B5", "#08519C", "#08306B")
)

choropleth %>%
  e_charts(countries) %>%
  e_geo_3d(height, color)
```

`e_get_data`*Get data*

Description

Get data passed to [e_charts](#).

Usage

```
e_get_data(e)
```

Arguments

`e` An `echarts4r` object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).

Value

A list of `data.frames`, one for each group.

Examples

```
echart <- cars %>%  
  e_charts(speed) %>%  
  e_scatter(dist) %>%  
  e_lm(dist ~ speed)  
  
echart  
  
e_get_data(echart)[[1]]
```

`e_globe`*Globe*

Description

Add globe.

Usage

```
e_globe(e, environment = NULL, base_texture = NULL, height_texture = NULL, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
environment	Texture of background.
base_texture	Base texture of globe.
height_texture	Texture of height.
...	Any other option to pass, check See Also section.

See Also

[e_country_names](#), [Additional arguments](#)

Examples

```
## Not run:
url <- paste0("https://ecomfe.github.io/echarts-examples/",
             "public/data-gl/asset/data/population.json")
data <- jsonlite::fromJSON(url)
data <- as.data.frame(data)
names(data) <- c("lon", "lat", "value")

data %>%
  e_charts(lon) %>%
  e_globe(
    displacementScale = 0.04
  ) %>%
  e_bar_3d(lat, value, "globe") %>%
  e_visual_map(show = FALSE)

## End(Not run)
```

e_graph

Graph

Description

Create a graph.

Usage

```
e_graph(e, layout = "force", name = NULL, rm_x = TRUE, rm_y = TRUE, ...)
```

```
e_graph_gl(e, layout = "force", name = NULL, rm_x = TRUE, rm_y = TRUE, ...)
```

```
e_graph_nodes(
  e,
  nodes,
```

```

    names,
    value,
    size,
    category,
    symbol = NULL,
    legend = TRUE
  )

  e_graph_edges(e, edges, source, target)

```

Arguments

e	An echarts4 object as returned by e_charts.
layout	Layout, one of force, none or circular.
name	Name of graph.
rm_x, rm_y	Whether to remove the x and y axis, defaults to TRUE.
...	Any other parameter.
nodes	Data.frame of nodes.
names	Names of nodes, unique.
value	values of nodes.
size	Size of nodes.
category	Group of nodes (i.e.: group membership).
symbol	Symbols of nodes.
legend	Whether to add serie to legend.
edges	Data.frame of edges.
source, target	Column names of source and target.

See Also

[Additional arguments](#), [e_modularity](#)

Examples

```

value <- rnorm(10, 10, 2)

nodes <- data.frame(
  name = sample(LETTERS, 10),
  value = value,
  size = value,
  symbol = sample(c("circle", "rect", "triangle"), 10, replace = TRUE),
  grp = rep(c("grp1", "grp2"), 5),
  stringsAsFactors = FALSE
)

edges <- data.frame(
  source = sample(nodes$name, 20, replace = TRUE),

```

```
target = sample(nodes$name, 20, replace = TRUE),
stringsAsFactors = FALSE
)

e_charts() %>%
  e_graph() %>%
  e_graph_nodes(nodes, name, value, size, grp, symbol) %>%
  e_graph_edges(edges, source, target)

#Use graphGL for larger networks
nodes <- data.frame(
  name = paste0(LETTERS, 1:1000),
  value = rnorm(1000, 10, 2),
  size = rnorm(1000, 10, 2),
  grp = rep(c("grp1", "grp2"), 500),
  stringsAsFactors = FALSE
)

edges <- data.frame(
  source = sample(nodes$name, 2000, replace = TRUE),
  target = sample(nodes$name, 2000, replace = TRUE),
  stringsAsFactors = FALSE
)

e_charts() %>%
  e_graph_gl() %>%
  e_graph_nodes(nodes, name, value, size, grp) %>%
  e_graph_edges(edges, source, target)
```

e_graphic_g

Graphic

Description

Low level API to define graphic elements.

Usage

e_graphic_g(e, ...)

e_group_g(e, ...)

e_image_g(e, ...)

e_text_g(e, ...)

e_rect_g(e, ...)

e_circle_g(e, ...)

e_ring_g(e, ...)

e_sector_g(e, ...)

e_arc_g(e, ...)

e_polygon_g(e, ...)

e_polyline_g(e, ...)

e_line_g(e, ...)

e_bezier_curve_g(e, ...)

Arguments

e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).
... Any other option to pass, check See Also section.

Functions

- e_graphic_g to initialise graphics, entirely optional.
- e_group_g to create group, the children of which will share attributes.
- e_image_g to a png or jpg image.
- e_text_g to add text.
- e_rect_g to add a rectangle.
- e_circle_g to add a circle.
- e_ring_g to add a ring.
- e_sector_g
- e_arc_g to create an arc.
- e_polygon_g to create a polygon.
- e_polyline_g to create a polyline.
- e_line_g to draw a line.
- e_bezier_curve_g to draw a quadratic bezier curve or cubic bezier curve.

Note

Some elements, i.e.: e_image_g may not display in the RStudio browser but will work fine in your browser, R markdown documents and Shiny applications.

See Also

[official documentation](#)

Examples

```
# may not work in RStudio viewer
# Open in browser
cars %>%
  e_charts(speed) %>%
  e_scatter(dist) %>%
  e_image_g(
    right = 20,
    top = 20,
    z = -999,
    style = list(
      image = "https://www.r-project.org/logo/Rlogo.png",
      width = 150,
      height = 150,
      opacity = .6
    )
  )
)
```

e_grid

Grid

Description

Customise grid.

Usage

```
e_grid(e, index = NULL, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
index	Index of axis to customise.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
USArrests %>%
  e_charts(UrbanPop) %>%
  e_line(Assault, smooth = TRUE) %>%
  e_area(Murder, y.index = 1, x.index = 1) %>%
  e_y_axis(gridIndex = 1) %>%
  e_x_axis(gridIndex = 1) %>%
```

```
e_grid(height = "40%") %>%
e_grid(height = "40%", top = "55%")
```

e_grid_3d

Grid

Description

Customise grid.

Usage

```
e_grid_3d(e, index = 0, ...)
```

Arguments

e An echarts4r object as returned by `e_charts` or a proxy as returned by `echarts4rProxy`.

index Index of axis to customise.

... Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
# phony data
v <- LETTERS[1:10]
matrix <- data.frame(
  x = sample(v, 300, replace = TRUE),
  y = sample(v, 300, replace = TRUE),
  z1 = rnorm(300, 10, 1),
  z2 = rnorm(300, 10, 1),
  stringsAsFactors = FALSE
) %>%
  dplyr::group_by(x, y) %>%
  dplyr::summarise(
    z1 = sum(z1),
    z2 = sum(z2)
  ) %>%
  dplyr::ungroup()

trans <- list(opacity = 0.4) # transparency
emphasis <- list(itemStyle = list(color = "#313695"))

matrix %>%
  e_charts(x) %>%
  e_bar_3d(y, z1, stack = "stack", name = "Serie 1", itemStyle = trans, emphasis = emphasis) %>%
```

```
e_bar_3d(y, z2, stack = "stack", name = "Serie 2", itemStyle = trans, emphasis = emphasis) %>%
  e_grid_3d(splitLine = list(lineStyle = list(color = "blue")))
```

e_heatmap

Heatmap

Description

Draw heatmap by coordinates.

Usage

```
e_heatmap(
  e,
  y,
  z,
  bind,
  name = NULL,
  coord_system = "cartesian2d",
  rm_x = TRUE,
  rm_y = TRUE,
  calendar = NULL,
  ...
)
```

```
e_heatmap_(
  e,
  y,
  z = NULL,
  bind = NULL,
  name = NULL,
  coord_system = "cartesian2d",
  rm_x = TRUE,
  rm_y = TRUE,
  calendar = NULL,
  ...
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
y, z	Coordinates and values.
bind	Binding between datasets, namely for use of e_brush .
name	name of the serie.
coord_system	Coordinate system to plot against, takes cartesian2d, geo or calendar.

rm_x, rm_y	Whether to remove x and y axis, only applies if coord_system is not set to cartesian2d.
calendar	The index of the calendar to plot against.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
v <- LETTERS[1:10]
matrix <- data.frame(
  x = sample(v, 300, replace = TRUE),
  y = sample(v, 300, replace = TRUE),
  z = rnorm(300, 10, 1),
  stringsAsFactors = FALSE
) %>%
  dplyr::group_by(x, y) %>%
  dplyr::summarise(z = sum(z)) %>%
  dplyr::ungroup()

matrix %>%
  e_charts(x) %>%
  e_heatmap(y, z, itemStyle = list(emphasis = list(shadowBlur = 10))) %>%
  e_visual_map(z)

# calendar
dates <- seq.Date(as.Date("2017-01-01"), as.Date("2018-12-31"), by = "day")
values <- rnorm(length(dates), 20, 6)

year <- data.frame(date = dates, values = values)

year %>%
  e_charts(date) %>%
  e_calendar(range = "2018") %>%
  e_heatmap(values, coord_system = "calendar") %>%
  e_visual_map(max = 30)

# calendar multiple years
year %>%
  dplyr::mutate(year = format(date, "%Y")) %>%
  group_by(year) %>%
  e_charts(date) %>%
  e_calendar(range = "2017", top = 40) %>%
  e_calendar(range = "2018", top = 260) %>%
  e_heatmap(values, coord_system = "calendar") %>%
  e_visual_map(max = 30)

# map
quakes %>%
  e_charts(long) %>%
```

```

    e_geo(
      boundingCoords = list(
        c(190, -10),
        c(180, -40)
      )
    ) %>%
    e_heatmap(
      lat,
      mag,
      coord_system = "geo",
      blurSize = 5,
      pointSize = 3
    ) %>%
    e_visual_map(mag)

# timeline
library(dplyr)

axis <- LETTERS[1:10]
df <- expand.grid(axis, axis)

bind_rows(df, df) %>%
  mutate(
    values = runif(n(), 1, 10),
    grp = c(
      rep("A", 100),
      rep("B", 100)
    )
  ) %>%
  group_by(grp) %>%
  e_charts(Var1, timeline = TRUE) %>%
  e_heatmap(Var2, values) %>%
  e_visual_map(values)

```

e_hide_grid_lines *' Hide Grid Lines*

Description

A convenience function to easily hide grid lines.

Usage

```
e_hide_grid_lines(e, which = c("x", "y"))
```

Arguments

e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).

which Which axis grid lines to hide.

Examples

```
cars %>%
  e_charts(speed) %>%
  e_scatter(dist) %>%
  e_hide_grid_lines()
```

e_highlight_p

Highlight & Downplay Proxy

Description

Proxies to highlight and downplay series.

Usage

```
e_highlight_p(proxy, series_index = NULL, series_name = NULL)
```

```
e_downplay_p(proxy, series_index = NULL, series_name = NULL)
```

Arguments

proxy	An echarts4r proxy as returned by echarts4rProxy .
series_index	Series index, can be a vector.
series_name	Series Name, can be vector.

Examples

```
## Not run:
library(shiny)

ui <- fluidPage(
  fluidRow(
    column(
      3,
      actionButton("highlightmpg", "Highlight MPG")
    ),
    column(
      3,
      actionButton("highlighthp", "Highlight HP")
    ),
    column(
      3,
      actionButton("downplaympg", "Downplay MPG")
    ),
    column(
      3,
      actionButton("downplayhp", "Downplay HP")
    )
  )
)
```

```

    )
  ),
  echarts4rOutput("plot")
)

server <- function(input, output, session){
  output$plot <- renderEcharts4r({
    mtcars %>%
      e_charts(mpg) %>%
      e_line(displ) %>%
      e_line(hp, name = "HP") # explicitly pass name
  })

  # highlight

  observeEvent(input$highlightmpg, {
    echarts4rProxy("plot") %>%
      e_highlight_p(series_index = 0) # using index
  })

  observeEvent(input$highlighthp, {
    echarts4rProxy("plot") %>%
      e_highlight_p(series_name = "HP") # using name
  })

  # downplay

  observeEvent(input$downplaympg, {
    echarts4rProxy("plot") %>%
      e_downplay_p(series_name = "displ")
  })

  observeEvent(input$downplayhp, {
    echarts4rProxy("plot") %>%
      e_downplay_p(series_index = 1)
  })
}

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

## End(Not run)

```

e_histogram

Histogram & Density

Description

Add a histogram or density plots.

Usage

```
e_histogram(  
  e,  
  serie,  
  breaks = "Sturges",  
  name = NULL,  
  legend = TRUE,  
  bar_width = "99%",  
  x_index = 0,  
  y_index = 0,  
  ...  
)
```

```
e_density(  
  e,  
  serie,  
  breaks = "Sturges",  
  name = NULL,  
  legend = TRUE,  
  x_index = 0,  
  y_index = 0,  
  smooth = TRUE,  
  ...  
)
```

```
e_histogram_(  
  e,  
  serie,  
  breaks = "Sturges",  
  name = NULL,  
  legend = TRUE,  
  bar_width = "90%",  
  x_index = 0,  
  y_index = 0,  
  ...  
)
```

```
e_density_(  
  e,  
  serie,  
  breaks = "Sturges",  
  name = NULL,  
  legend = TRUE,  
  x_index = 0,  
  y_index = 0,  
  smooth = TRUE,  
  ...  
)
```


Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to plot.
breaks	Passed to hist .
name	name of the serie.
legend	Whether to add serie to legend.
bar_width	Width of bars.
x_index	Indexes of x and y axis.
y_index	Indexes of x and y axis.
...	Any other option to pass, check See Also section.
smooth	Whether to use smoothed lines, passed to e_line .

Examples

```
mtcars %>%
  e_charts() %>%
  e_histogram(mpg, name = "histogram") %>%
  e_density(mpg, areaStyle = list(opacity = .4), smooth = TRUE, name = "density", y_index = 1) %>%
  e_tooltip(trigger = "axis")

# timeline
mtcars %>%
  group_by(cyl) %>%
  e_charts(timeline = TRUE) %>%
  e_histogram(mpg, name = "histogram") %>%
  e_density(mpg, name = "density", y_index = 1)
```

e_inspect*To & From JSON*

Description

Get JSON options from an echarts4r object and build one from JSON.

Usage

```
e_inspect(e, json = FALSE, ...)
```

```
echarts_from_json(txt)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
json	Whether to return the JSON, otherwise returns a list.
...	Additional options to pass to toJSON .
txt	JSON character string, url, or file.

Details

txt should contain the full list of options required to build a chart. This is subsequently passed to the setOption ECharts (JavaScript) function.

Value

e_inspect Returns a list if json is FALSE and a JSON string otherwise. echarts_from_json returns an object of class echarts4r.

Note

Must be passed as last option.

Examples

```
p <- cars %>%
  e_charts(dist) %>%
  e_scatter(speed, symbol_size = 10)

p # plot

# extract the JSON
json <- p %>%
  e_inspect(
    json = TRUE,
    pretty = TRUE
  )

# print json
json

# rebuild plot
echarts_from_json(json) %>%
  e_theme("dark") # modify
```

e_labels

Format labels

Description

Format labels

Usage

```
e_labels(e, show = TRUE, position = "top", ...)
```

Arguments

e	An echarts4r object as returned by <code>e_charts</code> or a proxy as returned by <code>echarts4rProxy</code> .
show	Set to TRUE to show the labels.
position	Position of labels, see official documentation for the full list of options.
...	Any other options see documentation for other options.

Examples

```
mtcars %>%
  e_chart(wt) %>%
  e_scatter(qsec, cyl) %>%
  e_labels(fontSize = 9)
```

```
mtcars %>%
  group_by(cyl) %>%
  e_chart(wt) %>%
  e_scatter(qsec, mpg) %>%
  e_labels(fontSize = 9)
```

```
# timeline
mtcars %>%
  group_by(cyl) %>%
  e_chart(wt) %>%
  e_scatter(qsec, mpg) %>%
  e_labels(fontSize = 9)
```

e_leaflet

Leaflet

Description

Leaflet extension.

Usage

```
e_leaflet(e, roam = TRUE, ...)

e_leaflet_tile(
  e,
  template = "https://{s}.tile.openstreetmap.fr/hot/{z}/{x}/{y}.png",
  options = NULL,
  ...
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
roam	Whether to allow the user to roam.
...	Any other option to pass, check See Also section.
template	urlTemplate, should not be changed.
options	List of options, including attribution and label.

Note

Will not render in the RStudio, open in browser.

Examples

```
## Not run:
url <- paste0("https://ecomfe.github.io/echarts-examples/",
              "public/data-gl/asset/data/population.json")
data <- jsonlite::fromJSON(url)
data <- as.data.frame(data)
names(data) <- c("lon", "lat", "value")
data$value <- log(data$value)

data %>%
  e_charts(lon) %>%
  e_leaflet() %>%
  e_leaflet_tile() %>%
  e_scatter(lat, size = value, coord.system = "leaflet")

## End(Not run)
```

e_legend

Legend

Description

Customise the legend.

Usage

```
e_legend(e, show = TRUE, type = c("plain", "scroll"), icons = NULL, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
show	Set to FALSE to hide the legend.
type	Type of legend, plain or scroll.
icons	A optional list of icons the same length as there are series, see example.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
e <- cars %>%
  e_charts(speed) %>%
  e_scatter(dist, symbol_size = 5)

# with legend
e

# without legend
e %>%
  e_legend(show = FALSE)

# with icon
# path is taken from http://svgicons.sparkk.fr/
path <- paste0(
  "path://M11.344,5.71c0-0.73,0.074-1.122,1.199-1.122",
  "h1.502V1.871h-2.404c-2.886,0-3.903,1.36-3.903,3.646",
  "v1.765h-1.8V10h1.8v8.128h3.601V10h2.403l0.32-2.718h",
  "-2.724L11.344,5.71z"
)

e %>%
  e_legend(
    icons = list(path)
  )
```

e_line

Line

Description

Add line serie.

Usage

```
e_line(
  e,
  serie,
  bind,
  name = NULL,
  legend = TRUE,
  y_index = 0,
  x_index = 0,
  coord_system = "cartesian2d",
```

```

    ...
  )

  e_line_(
    e,
    serie,
    bind = NULL,
    name = NULL,
    legend = TRUE,
    y_index = 0,
    x_index = 0,
    coord_system = "cartesian2d",
    ...
  )

```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to plot.
bind	Binding between datasets, namely for use of e_brush .
name	name of the serie.
legend	Whether to add serie to legend.
y_index	Indexes of x and y axis.
x_index	Indexes of x and y axis.
coord_system	Coordinate system to plot against.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```

iris %>%
  group_by(Species) %>%
  e_charts(Sepal.Length) %>%
  e_line(Sepal.Width) %>%
  e_tooltip(trigger = "axis")

# timeline
iris %>%
  group_by(Species) %>%
  e_charts(Sepal.Length, timeline = TRUE) %>%
  e_line(Sepal.Width) %>%
  e_tooltip(trigger = "axis")

```

e_lines

Lines

Description

Add lines.

Usage

```
e_lines(  
  e,  
  source_lon,  
  source_lat,  
  target_lon,  
  target_lat,  
  source_name,  
  target_name,  
  value,  
  coord_system = "geo",  
  name = NULL,  
  rm_x = TRUE,  
  rm_y = TRUE,  
  ...  
)
```

```
e_lines_(  
  e,  
  source_lon,  
  source_lat,  
  target_lon,  
  target_lat,  
  source_name = NULL,  
  target_name = NULL,  
  value = NULL,  
  coord_system = "geo",  
  name = NULL,  
  rm_x = TRUE,  
  rm_y = TRUE,  
  ...  
)
```

Arguments

e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).
source_lon, source_lat, target_lon, target_lat coordinates.

source_name, target_name	Names of source and target.
value	Value of edges.
coord_system	Coordinate system to use, one of geo, or cartesian2d.
name	name of the serie.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```

flights <- read.csv(
  paste0("https://raw.githubusercontent.com/plotly/datasets/",
        "master/2011_february_aa_flight_paths.csv")
)

flights %>%
  e_charts() %>%
  e_geo() %>%
  e_lines(
    start_lon,
    start_lat,
    end_lon,
    end_lat,
    airport1,
    airport2,
    cnt,
    name = "flights",
    lineStyle = list(normal = list(curveness = 0.3))
  ) %>%
  e_tooltip(trigger="item",
    formatter = htmlwidgets::JS("
      function(params){
        return(
          params.seriesName + '<br />' +
          params.data.source_name + ' -> ' +
          params.data.target_name + ':' + params.value
        )
      }
    ")
  )

# timeline
flights$grp <- rep(LETTERS[1:2], 89)

flights %>%
  group_by(grp) %>%
  e_charts(timeline = TRUE) %>%

```



```

e_geo() %>%
e_lines(
  start_lon,
  start_lat,
  end_lon,
  end_lat,
  cnt,
  coord_system = "geo"
)

```

e_lines_3d

Lines 3D

Description

Add 3D lines.

Usage

```

e_lines_3d(
  e,
  source_lon,
  source_lat,
  target_lon,
  target_lat,
  source_name,
  target_name,
  value,
  name = NULL,
  coord_system = "globe",
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)

```

```

e_line_3d(
  e,
  y,
  z,
  name = NULL,
  coord_system = NULL,
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)

```

```

e_lines_3d_(

```

```

    e,
    source_lon,
    source_lat,
    target_lon,
    target_lat,
    source_name = NULL,
    target_name = NULL,
    value = NULL,
    name = NULL,
    coord_system = "globe",
    rm_x = TRUE,
    rm_y = TRUE,
    ...
)

e_line_3d(
  e,
  y,
  z,
  name = NULL,
  coord_system = NULL,
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)

```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
source_lon, source_lat, target_lon, target_lat	coordinates.
source_name, target_name	Names of source and target.
value	Value of edges.
name	name of the serie.
coord_system	Coordinate system to use, such as cartesian3D, or globe.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.
y, z	Coordinates of lines.

See Also

[Additional arguments for lines 3D](#), [Additional arguments for line 3D](#)

<https://echarts4r-assets.john-coene.com>

Examples

```
# get data
flights <- read.csv(
  paste0("https://raw.githubusercontent.com/plotly/datasets/",
        "master/2011_february_aa_flight_paths.csv")
)

# Lines 3D
# Globe
# get tetures: echarts4r-assets.john-coene.com
flights %>%
  e_charts() %>%
  e_globe(
    displacementScale = 0.05
  ) %>%
  e_lines_3d(
    start_lon,
    start_lat,
    end_lon,
    end_lat,
    name = "flights",
    effect = list(show = TRUE)
  ) %>%
  e_legend(FALSE)

# Geo 3D
flights %>%
  e_charts() %>%
  e_geo_3d() %>%
  e_lines_3d(
    start_lon,
    start_lat,
    end_lon,
    end_lat,
    coord_system = "geo3D"
  )

# groups
flights$grp <- rep(LETTERS[1:2], 89)

flights %>%
  group_by(grp) %>%
  e_charts() %>%
  e_geo_3d() %>%
  e_lines_3d(
    start_lon,
    start_lat,
    end_lon,
    end_lat,
    coord_system = "geo3D"
  )
```

```

# line 3D
df <- data.frame(
  x = 1:100,
  y = runif(100, 10, 25),
  z = rnorm(100, 100, 50)
)

df %>%
  e_charts(x) %>%
  e_line_3d(y, z) %>%
  e_visual_map() %>%
  e_title("nonsense")

# timeline
df$grp <- rep(LETTERS[1:5], 20)

df %>%
  group_by(grp) %>%
  e_charts(x) %>%
  e_line_3d(y, z) %>%
  e_visual_map() %>%
  e_title("nonsense")

```

e_lines_gl

Lines WebGL

Description

Draw WebGL lines.

Usage

```
e_lines_gl(e, data, coord_system = "geo", ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
data	A list.
coord_system	Coordinate system to plot against.
...	Any other options (this series type is mostly undocumented).

e_liquid	<i>Liquid fill</i>
----------	--------------------

Description

Draw liquid fill.

Usage

```
e_liquid(e, serie, color, rm_x = TRUE, rm_y = TRUE, ...)
```

```
e_liquid_(e, serie, color = NULL, rm_x = TRUE, rm_y = TRUE, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to plot.
color	Color to plot.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

See Also

[official documentation](#)

Examples

```
df <- data.frame(val = c(0.6, 0.5, 0.4))

df %>%
  e_charts() %>%
  e_liquid(val) %>%
  e_theme("dark")
```

e_list	<i>List</i>
--------	-------------

Description

simply pass a list of options, similar to a JSON.

Usage

```
e_list(e, list, append = FALSE)
```

Arguments

- e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).
- list A list of options passed to setOptions.
- append if TRUE the list is appended to the options, otherwise it *overwrites* everything.

Examples

```

N <- 20 # data points

opts <- list(
  xAxis = list(
    type = "category",
    data = LETTERS[1:N]
  ),
  yAxis = list(
    type = "value"
  ),
  series = list(
    list(
      type = "line",
      data = round(runif(N, 5, 20))
    )
  )
)

e_charts() %>%
  e_list(opts)

```

e_lm

Smooth

Description

Plot formulas.

Usage

```

e_lm(
  e,
  formula,
  name = NULL,
  legend = TRUE,
  symbol = "none",
  smooth = TRUE,
  ...
)

```

```

e_glm(
  e,
  formula,
  name = NULL,
  legend = TRUE,
  symbol = "none",
  smooth = TRUE,
  ...
)

e_loess(
  e,
  formula,
  name = NULL,
  legend = TRUE,
  symbol = "none",
  smooth = TRUE,
  x_index = 0,
  y_index = 0,
  ...
)

```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
formula	formula to pass to lm .
name	name of the serie.
legend	Whether to add serie to legend.
symbol	Symbol to use in e_line .
smooth	Whether to smooth the line.
...	Additional arguments to pass to e_line .
x_index	Indexes of x and y axis.
y_index	Indexes of x and y axis.

Examples

```

iris %>%
  group_by(Species) %>%
  e_charts(Sepal.Length) %>%
  e_scatter(Sepal.Width) %>%
  e_lm(Sepal.Width ~ Sepal.Length) %>%
  e_x_axis(min = 4)

mtcars %>%
  e_charts(displ) %>%
  e_scatter(mpg, qsec) %>%
  e_loess(mpg ~ displ, smooth = TRUE, showSymbol = FALSE)

```

```
# timeline
iris %>%
  group_by(Species) %>%
  e_charts(Sepal.Length, timeline = TRUE) %>%
  e_scatter(Sepal.Width) %>%
  e_lm(Sepal.Width ~ Sepal.Length) %>%
  e_x_axis(min = 4, max = 8) %>%
  e_y_axis(max = 5)
```

e_map

Choropleth

Description

Draw maps.

Usage

```
e_map(e, serie, map = "world", name = NULL, rm_x = TRUE, rm_y = TRUE, ...)
```

```
e_map_(
  e,
  serie = NULL,
  map = "world",
  name = NULL,
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)
```

```
e_map_3d(
  e,
  serie,
  map = "world",
  name = NULL,
  coord_system = NULL,
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)
```

```
e_map_3d_(
  e,
  serie = NULL,
  map = "world",
  name = NULL,
```



```

    coord_system = NULL,
    rm_x = TRUE,
    rm_y = TRUE,
    ...
)

e_map_3d_custom(
  e,
  id,
  value,
  height,
  map = NULL,
  name = NULL,
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)

```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Values to plot.
map	Map type.
name	name of the serie.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.
coord_system	Coordinate system to use, one of cartesian3D, geo3D, globe.
id, value, height	Columns corresponding to registered map.

See Also

[e_country_names](#), [Additional map arguments](#), [Additional map 3D arguments](#)

Examples

```

## Not run:
choropleth <- data.frame(
  countries = c("France", "Brazil", "China", "Russia", "Canada", "India", "United States",
               "Argentina", "Australia"),
  values = round(runif(9, 10, 25))
)

choropleth %>%
  e_charts(countries) %>%
  e_map(values) %>%
  e_visual_map(min = 10, max = 25)

```

```

choropleth %>%
  e_charts(countries) %>%
  e_map_3d(values, shading = "lambert") %>%
  e_visual_map(min = 10, max = 30)

# custom
buildings <- jsonlite::read_json(
  paste0(
    "https://ecomfe.github.io/echarts-examples/",
    "public/data-gl/asset/data/buildings.json"
  )
)

heights <- purrr::map(buildings$features, "properties") %>%
  purrr::map("height") %>%
  unlist()

names <- purrr::map(buildings$features, "properties") %>%
  purrr::map("name") %>%
  unlist()

data <- dplyr::tibble(
  name = names,
  value = round(runif(length(names), 0, 1), 6),
  height = heights / 10
)

data %>%
  e_charts() %>%
  e_map_register("buildings", buildings) %>%
  e_map_3d_custom(name, value, height) %>%
  e_visual_map(
    show = FALSE,
    min = 0.4,
    max = 1
  )

# timeline
choropleth <- data.frame(
  countries = rep(choropleth$countries, 3)
) %>%
  dplyr::mutate(
    grp = c(
      rep(2016, nrow(choropleth)),
      rep(2017, nrow(choropleth)),
      rep(2018, nrow(choropleth))
    ),
    values = runif(27, 1, 10)
  )

choropleth %>%
  group_by(grp) %>%
  e_charts(countries, timeline = TRUE) %>%

```

```

e_map(values) %>%
  e_visual_map(min = 1, max = 10)

choropleth %>%
  group_by(grp) %>%
  e_charts(countries, timeline = TRUE) %>%
  e_map_3d(values) %>%
  e_visual_map(min = 1, max = 10)

## End(Not run)

```

e_map_register	<i>Register map</i>
----------------	---------------------

Description

Register a **geojson** map.

Usage

```

e_map_register(e, name, json)

e_map_register_p(
  name,
  json,
  async = FALSE,
  session = shiny::getDefaultReactiveDomain()
)

e_map_register_ui(name, json, async = FALSE)

```

Arguments

e	An echarts4r object as returned by e_charts .
name	Name of map, to use in e_map .
json	Geojson .
async	Whether to read the file asynchronously.
session	A valid Shiny session.

Details

e_map_register_p is not truly a proxy as it does not require a chart to function. While the function e_map_register_ui is meant to register the map globally in the Shiny UI, not that then json must be accessible from the UI (generally www folder).

Examples

```
## Not run:
json <- jsonlite::read_json("http://www.echartsjs.com/gallery/data/asset/geo/USA.json")

USArrests %>%
  dplyr::mutate(states = row.names(.)) %>%
  e_charts(states) %>%
  e_map_register("USA", json) %>%
  e_map(Murder, map = "USA") %>%
  e_visual_map(Murder)

## End(Not run)
```

e_mark_point

Mark point

Description

Mark points and lines.

Usage

```
e_mark_point(
  e,
  serie = NULL,
  data = NULL,
  ...,
  title = NULL,
  title_position = NULL
)

e_mark_line(
  e,
  serie = NULL,
  data = NULL,
  ...,
  title = NULL,
  title_position = NULL
)

e_mark_area(
  e,
  serie = NULL,
  data = NULL,
  ...,
  title = NULL,
  title_position = NULL
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Serie or vector of series to mark on, defaults to all series.
data	Placement of point, line or area.
...	Any other option to pass, check See Also section.
title	A convenience argument to easily set label, see details.
title_position	Position of title.

Details

To set a label you need to either use the `title` argument or pass a list specifying the label formatter. `label = list(formatter = "label")`. The former is more convenient but more limited, e.g.: you cannot specify the placement of the label.

See Also

[Additional point arguments](#), [Additional line arguments](#)

Examples

```
max <- list(
  name = "Max",
  type = "max"
)

min <- list(
  name = "Min",
  type = "min"
)

avg <- list(
  type = "average",
  name = "AVG"
)

mtcars %>%
  e_charts(mpg) %>%
  e_line(wt) %>%
  e_line(drat) %>%
  e_line(cyl) %>%
  e_mark_point("wt", data = max) %>%
  e_mark_point(c("cyl", "drat"), data = min) %>%
  e_mark_line(data = avg) %>% # applies to all
  e_mark_area(serie = "wt", data = list(
    list(xAxis = "min", yAxis = "min"),
    list(xAxis = "max", yAxis = "max"))
  )
```

e_modularity

Modularity

Description

Graph modularity extension will do community detection and partition a graph's vertices in several subsets. Each subset will be assigned a different color.

Usage

```
e_modularity(e, modularity = TRUE)
```

Arguments

e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).
modularity Either set to TRUE, or a list.

Modularity

- resolution Resolution
- sort Whether to sort to communities

Note

Does not work in RStudio viewer, open in browser.

See Also

[Official documentation](#)

Examples

```
nodes <- data.frame(
  name = paste0(LETTERS, 1:100),
  value = rnorm(100, 10, 2),
  stringsAsFactors = FALSE
)

edges <- data.frame(
  source = sample(nodes$name, 200, replace = TRUE),
  target = sample(nodes$name, 200, replace = TRUE),
  stringsAsFactors = FALSE
)

e_charts() %>%
  e_graph() %>%
  e_graph_nodes(nodes, name, value) %>%
  e_graph_edges(edges, source, target) %>%
  e_modularity(
```

```
list(  
  resolution = 5,  
  sort = TRUE  
)  
)
```

e_parallel

Parallel

Description

Draw parallel coordinates.

Usage

```
e_parallel(e, ..., name = NULL, rm_x = TRUE, rm_y = TRUE)
```

```
e_parallel_(e, ..., name = NULL, rm_x = TRUE, rm_y = TRUE)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
...	Any other option to pass, check See Also section.
name	name of the serie.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.

See Also

[Additional arguments](#)

Examples

```
df <- data.frame(  
  price = rnorm(5, 10),  
  amount = rnorm(5, 15),  
  letter = LETTERS[1:5]  
)  
  
df %>%  
  e_charts() %>%  
  e_parallel(price, amount, letter)
```

e_pictorial	<i>Pictorial</i>
-------------	------------------

Description

Pictorial bar chart is a type of bar chart that customized glyph (like images, SVG PathData) can be used instead of rectangular bar.

Usage

```
e_pictorial(
  e,
  serie,
  symbol,
  bind,
  name = NULL,
  legend = TRUE,
  y_index = 0,
  x_index = 0,
  ...
)
```

```
e_pictorial_(
  e,
  serie,
  symbol,
  bind = NULL,
  name = NULL,
  legend = TRUE,
  y_index = 0,
  x_index = 0,
  ...
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to plot.
symbol	Symbol to plot.
bind	Binding between datasets, namely for use of e_brush .
name	name of the serie.
legend	Whether to add serie to legend.
y_index	Indexes of x and y axis.
x_index	Indexes of x and y axis.
...	Any other option to pass, check See Also section.

Symbols

- Built-in circle, rect, roundRect, triangle, diamond, pin, arrow.
- SVG Path
- Images Path to image, don't forget to precede it with image://, see examples.

See Also

Additional arguments

Examples

```
# built-in symbols
y <- rnorm(10, 10, 2)
df <- data.frame(
  x = 1:10,
  y = y,
  z = y - rnorm(10, 5, 1)
)

df %>%
  e_charts(x) %>%
  e_bar(z, barWidth = 10) %>%
  e_pictorial(y, symbol = "rect", symbolRepeat = TRUE, z = -1,
    symbolSize = c(10, 4)) %>%
  e_theme("westeros")

# svg path
path <- "path://M0,10 L10,10 C5.5,10 5.5,5 5,0 C4.5,5 4.5,10 0,10 z"

style <- list(
  normal = list(opacity = 0.5), # normal
  emphasis = list(opacity = 1) # on hover
)

df %>%
  e_charts(x) %>%
  e_pictorial(y, symbol = path, barCategoryGap = "-130%",
    itemStyle = style)

# image
# might not work in RStudio viewer
# open in browser
qomo <- paste0(
  "https://ecomfe.github.io/echarts-examples/public/",
  "data/asset/img/hill-Qomolangma.png"
)

kili <- paste0(
  "https://ecomfe.github.io/echarts-examples/public/",
  "data/asset/img/hill-Kilimanjaro.png"
)
```

```

data <- data.frame(
  x = c("Qomolangma", "Kilimanjaro"),
  value = c(8844, 5895),
  symbol = c(paste0("image://", qomo),
             paste0("image://", kili))
)

data %>%
  e_charts(x) %>%
  e_pictorial(value, symbol) %>%
  e_legend(FALSE)

# timeline
df <- data.frame(
  x = rep(1:5, 2),
  y = runif(10, 1, 10),
  year = c(
    rep(2017, 5),
    rep(2018, 5)
  )
)

df %>%
  group_by(year) %>%
  e_charts(x, timeline = TRUE) %>%
  e_pictorial(
    y, symbol = "rect",
    symbolRepeat = TRUE, z = -1,
    symbolSize = c(10, 4)
  )

```

e_pie

Pie

Description

Draw pie and donut charts.

Usage

```
e_pie(e, serie, name = NULL, legend = TRUE, rm_x = TRUE, rm_y = TRUE, ...)
```

```
e_pie_(e, serie, name = NULL, legend = TRUE, rm_x = TRUE, rm_y = TRUE, ...)
```

Arguments

e An echarts4r object as returned by `e_charts` or a proxy as returned by `echarts4rProxy`.

serie Column name of serie to plot.

name	name of the serie.
legend	Whether to add serie to legend.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
mtcars %>%
  head() %>%
  dplyr::mutate(model = row.names(.)) %>%
  e_charts(model) %>%
  e_pie(carb)

# timeline
df <- data.frame(
  grp = c("A", "A", "A", "B", "B", "B"),
  labels = rep(LETTERS[1:3], 2),
  values = runif(6, 1, 5)
)

df %>%
  group_by(grp) %>%
  e_charts(labels, timeline = TRUE) %>%
  e_pie(values)
```

e_polar

Polar

Description

Customise polar coordinates.

Usage

```
e_polar(e, show = TRUE, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
show	Whether to display the axis.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
df <- data.frame(x = 1:10, y = seq(1, 20, by = 2))

df %>%
  e_charts(x) %>%
  e_polar() %>%
  e_angle_axis() %>%
  e_radius_axis() %>%
  e_line(y, coord.system = "polar", smooth = TRUE)
```

e_radar

Radar

Description

Add a radar chart

Usage

```
e_radar(
  e,
  serie,
  max = 100,
  name = NULL,
  legend = TRUE,
  rm_x = TRUE,
  rm_y = TRUE,
  ...,
  radar = list()
)
```

```
e_radar_(
  e,
  serie,
  max = 100,
  name = NULL,
  legend = TRUE,
  rm_x = TRUE,
  rm_y = TRUE,
  ...,
  radar = list()
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to plot.
max	Maximum value.
name	name of the serie.
legend	Whether to add serie to legend.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.
radar	A list of options to pass to the radar rather than the serie, see official documentation alternatively, use the e_radar_opts .

Examples

```
df <- data.frame(
  x = LETTERS[1:5],
  y = runif(5, 1, 5),
  z = runif(5, 3, 7)
)

df %>%
  e_charts(x) %>%
  e_radar(y, max = 7) %>%
  e_radar(z) %>%
  e_tooltip(trigger = "item")
```

e_radar_opts

Radar axis

Description

Radar axis setup and options.

Usage

```
e_radar_opts(e, index = 0, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
index	Index of axis to customise.
...	Any other option to pass, check See Also section.

Examples

```
df <- data.frame(
  x = LETTERS[1:5],
  y = runif(5, 1, 5),
  z = runif(5, 3, 7)
)

df %>%
  e_charts(x) %>%
  e_radar(y, max = 7) %>%
  e_radar(z) %>%
  e_radar_opts(center = c("25%", "25%")) %>%
  e_tooltip(trigger = "item")
```

e_remove*Remove Serie*

Description

Remove a serie by name or precising its index.

Usage

```
e_remove_serie_p(proxy, serie_name = NULL, serie_index = NULL)
```

```
e_remove_serie(proxy, serie_name = NULL, serie_index = NULL)
```

Arguments

proxy An echarts4r proxy as returned by [echarts4rProxy](#).

serie_name Name of serie to remove.

serie_index Index of serie to append to (starts from 0).

Examples

```
library(shiny)

ui <- fluidPage(
  actionButton("rm", "Remove z serie"),
  echarts4rOutput("plot")
)

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

  data <- data.frame(
    x = rnorm(10, 5, 3),
    y = rnorm(10, 50, 12),
```

```
    z = rnorm(10, 50, 5)
  )

  output$plot <- renderEcharts4r({
    data %>%
      e_charts(x) %>%
      e_scatter(y) %>%
      e_scatter(z)
  })

  observeEvent(input$rm, {
    echarts4rProxy("plot") %>%
      e_remove_serie_p(serie_name = "z")
  })
}

## Not run: shinyApp(ui, server)
```

e_resize

Resize

Description

Force resize the chart.

Usage

```
e_resize(proxy)
```

Arguments

proxy An echarts4r proxy as returned by [echarts4rProxy](#).

e_restore

Restore Toolbox

Description

Restore Toolbox.

Usage

```
e_restore(e, btn = NULL)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
btn	A e_button id.

Examples

```
cars %>%
  e_charts(speed) %>%
  e_scatter(dist) %>%
  e_datazoom() %>%
  e_restore("btn") %>%
  e_button("btn", "Reset")
```

e_river

River

Description

Build a theme river.

Usage

```
e_river(e, serie, name = NULL, legend = TRUE, rm_x = TRUE, rm_y = TRUE, ...)
```

```
e_river_(e, serie, name = NULL, legend = TRUE, rm_x = TRUE, rm_y = TRUE, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to plot.
name	name of the serie.
legend	Whether to add serie to legend.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
dates <- seq.Date(Sys.Date() - 30, Sys.Date(), by = "day")
grps <- lapply(LETTERS[1:3], rep, 31) %>% unlist

df <- data.frame(
  dates = rep(dates, 3),
  groups = grps,
  values = runif(length(grps), 1, 50)
)

df %>%
  group_by(groups) %>%
  e_charts(dates) %>%
  e_river(values) %>%
  e_tooltip(trigger = "axis")
```

e_sankey

Sankey

Description

Draw a sankey diagram.

Usage

```
e_sankey(
  e,
  source,
  target,
  value,
  layout = "none",
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)

e_sankey_(
  e,
  source,
  target,
  value,
  layout = "none",
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
source, target	Source and target columns.
value	Value change from source to target.
layout	Layout of sankey.
rm_x, rm_y	Whether to remove the x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
sankey <- data.frame(
  source = c("a", "b", "c", "d", "c"),
  target = c("b", "c", "d", "e", "e"),
  value = ceiling(rnorm(5, 10, 1)),
  stringsAsFactors = FALSE
)
```

```
sankey %>%
  e_charts() %>%
  e_sankey(source, target, value)
```

e_scatter

Scatter

Description

Add scatter serie.

Usage

```
e_scatter(
  e,
  serie,
  size,
  bind,
  symbol = NULL,
  symbol_size = 1,
  scale = e_scale,
  scale_js = "function(data){ return data[3];}",
  name = NULL,
  coord_system = "cartesian2d",
```

```
    jitter_factor = 0,  
    jitter_amount = NULL,  
    legend = TRUE,  
    y_index = 0,  
    x_index = 0,  
    rm_x = TRUE,  
    rm_y = TRUE,  
    ...  
)  
  
e_effect_scatter(  
  e,  
  serie,  
  size,  
  bind,  
  symbol = NULL,  
  symbol_size = 1,  
  scale = e_scale,  
  scale_js = "function(data){ return data[3];}",  
  name = NULL,  
  coord_system = "cartesian2d",  
  legend = TRUE,  
  y_index = 0,  
  x_index = 0,  
  rm_x = TRUE,  
  rm_y = TRUE,  
  ...  
)  
  
e_scale(x)  
  
e_scatter_(  
  e,  
  serie,  
  size = NULL,  
  bind = NULL,  
  symbol = NULL,  
  symbol_size = 1,  
  scale = e_scale,  
  scale_js = "function(data){ return data[3];}",  
  name = NULL,  
  coord_system = "cartesian2d",  
  jitter_factor = 0,  
  jitter_amount = NULL,  
  legend = TRUE,  
  y_index = 0,  
  x_index = 0,  
  rm_x = TRUE,
```

```

    rm_y = TRUE,
    ...
)

e_effect_scatter_(
  e,
  serie,
  size = NULL,
  bind = NULL,
  symbol = NULL,
  symbol_size = 1,
  scale = e_scale,
  scale_js = "function(data){ return data[3];}",
  name = NULL,
  coord_system = "cartesian2d",
  legend = TRUE,
  y_index = 0,
  x_index = 0,
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)

```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to plot.
size	Column name containing size of points.
bind	Binding between datasets, namely for use of e_brush .
symbol	The symbol to use, default to NULL, can also be circle, rect, roundRect, triangle, diamond, pin, arrow, or none.
symbol_size	Size of points, either an integer or a vector of length 2, if size is <i>not</i> NULL or missing it is applied as a multiplier to scale.
scale	A function that takes a vector of numeric and returns a vector of numeric of the same length. You can disable the scaling by setting it to NULL.
scale_js	the JavaScript scaling function.
name	name of the serie.
coord_system	Coordinate system to plot against, see examples.
jitter_factor, jitter_amount	Jitter points, passed to jitter.
legend	Whether to add serie to legend.
y_index	Indexes of x and y axis.
x_index	Indexes of x and y axis.
rm_x, rm_y	Whether to remove x and y axis, only applies if coord_system is not set to cartesian2d.

... Any other option to pass, check See Also section.
 x A vector of integers or numeric.

Scaling function

defaults to `e_scale` which is a basic function that rescales `size` between 1 and 20 for that makes for decent sized points on the chart.

See Also

[Additional arguments scatter](#), [Additional arguments for effect scatter](#)

Examples

```
# scaling
e_scale(c(1, 1000))

mtcars %>%
  e_charts(mpg) %>%
  e_scatter(wt, qsec)

# custom function
my_scale <- function(x) scales::rescale(x, to = c(2, 50))

echart <- mtcars %>%
  e_charts(mpg) %>%
  e_scatter(wt, qsec, scale = my_scale)

echart

# rescale color too
echart %>%
  e_visual_map(wt, scale = my_scale)

# or
echart %>%
  e_visual_map(min = 2, max = 50)

# disable scaling
mtcars %>%
  e_charts(qsec) %>%
  e_scatter(wt, mpg, scale = NULL)

# jitter point
mtcars %>%
  e_charts(cyl) %>%
  e_scatter(wt, symbol_size = 5) %>%
  e_scatter(wt, jitter_factor = 2, legend = FALSE)

# examples
USArrests %>%
  e_charts(Assault) %>%
```

```

e_scatter(Murder, Rape) %>%
e_effect_scatter(Rape, Murder, y_index = 1) %>%
e_grid(index = c(0, 1)) %>%
e_tooltip()

iris %>%
e_charts_("Sepal.Length") %>%
e_scatter_(
  "Sepal.Width",
  symbol_size = c(8, 2),
  symbol = "rect"
) %>%
e_x_axis(min = 4)

quakes %>%
e_charts(long) %>%
e_geo(
  roam = TRUE,
  boundingCoords = list(
    c(185, - 10),
    c(165, -40)
  )
) %>%
e_scatter(lat, mag, coord_system = "geo") %>%
e_visual_map(min = 4, max = 6.5)

# timeline
iris %>%
group_by(Species) %>%
e_charts(Petal.Width, timeline = TRUE) %>%
e_scatter(Sepal.Width, Sepal.Length) %>%
e_tooltip(trigger = "axis")

```

e_scatter_3d

Scatter 3D

Description

Add 3D scatter.

Usage

```

e_scatter_3d(
  e,
  y,
  z,
  color,
  size,
  bind,

```

```

    coord_system = "cartesian3D",
    name = NULL,
    rm_x = TRUE,
    rm_y = TRUE,
    legend = FALSE,
    ...
)

e_scatter_3d(
  e,
  y,
  z,
  color = NULL,
  size = NULL,
  bind = NULL,
  coord_system = "cartesian3D",
  name = NULL,
  rm_x = TRUE,
  rm_y = TRUE,
  legend = FALSE,
  ...
)

```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
y, z	Coordinates.
color, size	Color and Size of bubbles.
bind	Binding.
coord_system	Coordinate system to use, one of geo3D, globe, or cartesian3D.
name	name of the serie.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
legend	Whether to add serie to legend.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```

v <- LETTERS[1:10]
matrix <- data.frame(
  x = sample(v, 300, replace = TRUE),
  y = sample(v, 300, replace = TRUE),
  z = rnorm(300, 10, 1),
  color = rnorm(300, 10, 1),

```

```

size = rnorm(300, 10, 1),
stringsAsFactors = FALSE
) %>%
dplyr::group_by(x, y) %>%
dplyr::summarise(
  z = sum(z),
  color = sum(color),
  size = sum(size)
) %>%
dplyr::ungroup()

matrix %>%
e_charts(x) %>%
e_scatter_3d(y, z, size, color) %>%
e_visual_map(
  min = 1, max = 100,
  inRange = list(symbolSize = c(1, 30)), # scale size
  dimension = 3 # third dimension 0 = x, y = 1, z = 2, size = 3
) %>%
e_visual_map(
  min = 1, max = 100,
  inRange = list(color = c('#bf444c', '#d88273', '#f6efa6')), # scale colors
  dimension = 4, # third dimension 0 = x, y = 1, z = 2, size = 3, color = 4
  bottom = 300 # padding to avoid visual maps overlap
)

airports <- read.csv(
  paste0("https://raw.githubusercontent.com/plotly/datasets/",
        "master/2011_february_us_airport_traffic.csv")
)

airports %>%
e_charts(long) %>%
e_globe(
  globeOuterRadius = 100
) %>%
e_scatter_3d(lat, cnt, coord_system = "globe", blendMode = 'lighter') %>%
e_visual_map(inRange = list(symbolSize = c(1, 10)))

# timeline
airports %>%
group_by(state) %>%
e_charts(long, timeline = TRUE) %>%
e_globe(
  globeOuterRadius = 100
) %>%
e_scatter_3d(lat, cnt, coord_system = "globe", blendMode = 'lighter') %>%
e_visual_map(inRange = list(symbolSize = c(1, 10)))

```


Description

Draw scatter GL.

Usage

```
e_scatter_gl(
  e,
  y,
  z,
  name = NULL,
  coord_system = "geo",
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)
```

```
e_scatter_gl_(
  e,
  y,
  z,
  name = NULL,
  coord_system = "geo",
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
y, z	Column names containing y and z data.
name	name of the serie.
coord_system	Coordinate system to plot against.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
quakes %>%
  e_charts(long) %>%
  e_geo(
    roam = TRUE,
    boundingCoords = list(
      c(185, - 10),
```

```

      c(165, -40)
    )
  ) %>%
  e_scatter_gl(lat, depth)

# timeline
quakes$year <- rep(c("2017", "2018"), 500)

quakes %>%
  group_by(year) %>%
  e_charts(long, timeline = TRUE) %>%
  e_geo(
    roam = TRUE,
    boundingCoords = list(
      c(185, - 10),
      c(165, -40)
    )
  ) %>%
  e_scatter_gl(lat, depth)

```

e_showtip_p

Tooltip Proxy

Description

Proxies to show or hide tooltip.

Usage

```
e_showtip_p(proxy, ...)
```

```
e_hidetip_p(proxy)
```

Arguments

proxy An echarts4r proxy as returned by [echarts4rProxy](#).

... Any other option, see [showTip](#).

Examples

```

## Not run:
library(shiny)

ui <- fluidPage(
  fluidRow(
    actionButton("show", "Show tooltip"),
    actionButton("hide", "Hide tooltip")
  ),

```

```

fluidRow(
  echarts4rOutput("plot"),
  h3("clicked Data"),
  verbatimTextOutput("clickedData"),
  h3("clicked Serie"),
  verbatimTextOutput("clickedSerie"),
  h3("clicked Row"),
  verbatimTextOutput("clickedRow")
)
)

server <- function(input, output, session){
  output$plot <- renderEcharts4r({
    mtcars %>%
      e_charts(mpg) %>%
      e_line(displacement, name = "displacement") %>%
      e_line(hp) %>%
      e_x_axis(min = 10) %>%
      e_tooltip(show = FALSE) %>%
      e_theme("westeros")
  })

  observeEvent(input$show, {
    echarts4rProxy("plot") %>%
      e_showtip_p(
        name = "displacement",
        position = list(5, 5)
      )
  })

  observeEvent(input$hide, {
    echarts4rProxy("plot") %>%
      e_hidetip_p()
  })

  output$clickedData <- renderPrint({
    input$plot_clicked_data
  })

  output$clickedSerie <- renderPrint({
    input$plot_clicked_serie
  })

  output$clickedRow <- renderPrint({
    input$plot_clicked_row
  })

}

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

## End(Not run)

```

e_show_loading	<i>Loading</i>
----------------	----------------

Description

Show or hide loading.

Usage

```
e_show_loading(  
  e,  
  hide_overlay = TRUE,  
  text = "loading",  
  color = "#c23531",  
  text_color = "#000",  
  mask_color = "rgba(255, 255, 255, 0.8)",  
  zlevel = 0  
)  
  
e_hide_loading(e)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
hide_overlay	Hides the white overaly that appears in shiny when a plot is recalculating.
text	Text to display.
color	Color of spinner.
text_color	Color of text.
mask_color	Color of mask.
zlevel	Z level.

Details

This only applies to Shiny.

Examples

```
## Not run:  
  
# no redraw  
# no loading  
library(shiny)  
ui <- fluidPage(  
  fluidRow(  
    
```

```
      column(12, actionButton("update", "Update"))
    ),
    fluidRow(
      column(12, echarts4rOutput("plot"))
    )
  )
)

server <- function(input, output){
  data <- eventReactive(input$update, {
    data.frame(
      x = 1:10,
      y = rnorm(10)
    )
  })

  output$plot <- renderEcharts4r({
    data() %>%
      e_charts(x) %>%
      e_bar(y)
  })
}

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

# add loading
server <- function(input, output){
  data <- eventReactive(input$update, {
    Sys.sleep(1) # sleep one second to show loading
    data.frame(
      x = 1:10,
      y = rnorm(10)
    )
  })

  output$plot <- renderEcharts4r({
    data() %>%
      e_charts(x) %>%
      e_bar(y) %>%
      e_show_loading()
  })
}

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

## End(Not run)
```

Description

Setup single axis.

Usage

```
e_single_axis(e, index = 0, ...)
```

Arguments

e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).
index Index of axis to customise.
... Any other option to pass, check See Also section.

Examples

```
df <- data.frame(
  axis = LETTERS[1:10],
  value = runif(10, 3, 20),
  size = runif(10, 3, 20)
)

df %>%
  e_charts(axis) %>%
  e_single_axis() %>% # add the single axis
  e_scatter(
    value,
    size,
    coord_system = "singleAxis"
  )
```

e_step

Step

Description

Add step serie.

Usage

```
e_step(
  e,
  serie,
  bind,
  step = c("start", "middle", "end"),
  fill = FALSE,
  name = NULL,
  legend = TRUE,
```

```

    y_index = 0,
    x_index = 0,
    coord_system = "cartesian2d",
    ...
)

e_step_(
  e,
  serie,
  bind = NULL,
  step = c("start", "middle", "end"),
  fill = FALSE,
  name = NULL,
  legend = TRUE,
  y_index = 0,
  x_index = 0,
  coord_system = "cartesian2d",
  ...
)

```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to plot.
bind	Binding between datasets, namely for use of e_brush .
step	Step type, one of start, middle or end.
fill	Set to fill as area.
name	name of the serie.
legend	Whether to add serie to legend.
y_index	Indexes of x and y axis.
x_index	Indexes of x and y axis.
coord_system	Coordinate system to plot against.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```

USArrests %>%
  dplyr::mutate(State = row.names(.)) %>%
  e_charts(State) %>%
  e_step(Murder, name = "Start", step = "start", fill = TRUE) %>%
  e_step(Rape, name = "Middle", step = "middle") %>%
  e_step(Assault, name = "End", step = "end") %>%
  e_tooltip(trigger = "axis")

```

```
# timeline
iris %>%
  group_by(Species) %>%
  e_charts(Sepal.Length, timeline = TRUE) %>%
  e_step(Sepal.Width) %>%
  e_tooltip(trigger = "axis")
```

e_sunburst

Sunburst

Description

Build a sunburst.

Usage

```
e_sunburst(e, parent, child, value, itemStyle, rm_x = TRUE, rm_y = TRUE, ...)
```

```
e_sunburst_(
  e,
  parent,
  child,
  value,
  itemStyle = NULL,
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
parent, child	Edges.
value	Name of column containing values.
itemStyle	Name of column containing styles to pass to child, expects a data.frame or a list, see details.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

Details

The itemStyle argument essentially is a nested data.frame with column names such as color, or borderColor as specified in the [official documentation](#).

See Also[Additional arguments](#)**Examples**

```
df <- data.frame(
  parent = c("earth", "earth", "earth", "mars", "mars"),
  child = c("forest", "ocean", "iceberg", "elon", "curiosity"),
  value = ceiling(rnorm(5, 10, 2))
)

df %>%
  e_charts() %>%
  e_sunburst(parent, child, value) %>%
  e_theme("westeros")

# with itemStyle
colors <- c("red", "black", "blue")

df$color <- sample(colors, 5, replace = TRUE)
df$borderColor <- sample(colors, 5, replace = TRUE)

df %>%
  tidyr::nest(c(color, borderColor), .key = "style") %>% # nest
  e_charts() %>%
  e_sunburst(parent, child, value, style)
```

`e_surface`*Surface*

Description

Add a surface plot.

Usage

```
e_surface(e, y, z, bind, name = NULL, rm_x = TRUE, rm_y = TRUE, ...)
```

```
e_surface_(e, y, z, bind = NULL, name = NULL, rm_x = TRUE, rm_y = TRUE, ...)
```

Arguments

<code>e</code>	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
<code>y, z</code>	Coordinates.
<code>bind</code>	Binding.
<code>name</code>	name of the serie.
<code>rm_x, rm_y</code>	Whether to remove x and y axis, defaults to TRUE.
<code>...</code>	Any other option to pass, check See Also section.

Examples

```

data("volcano")

surface <- as.data.frame(as.table(volcano))
surface$Var1 <- as.numeric(surface$Var1)
surface$Var2 <- as.numeric(surface$Var2)

surface %>%
  e_charts(Var1) %>%
  e_surface(Var2, Freq) %>%
  e_visual_map(Freq)

```

e_text_style

Text style

Description

Define global font style.

Usage

```
e_text_style(e, ...)
```

Arguments

e An echarts4r object as returned by `e_charts` or a proxy as returned by `echarts4rProxy`.
... Any other option to pass, check See Also section.

Note

Do not use `e_arrange` in R markdown or Shiny.

See Also

[official documentation](#)

Examples

```

cars %>%
  e_charts(dist) %>%
  e_scatter(speed) %>%
  e_labels() %>%
  e_text_style(
    color = "blue",
    fontStyle = "italic"
  )

```

e_theme

Themes

Description

Add a custom theme or apply a pre-built one.

Usage

```
e_theme(e, name)

e_theme_custom(e, theme, name = "custom")

e_theme_register(theme, name = "custom")
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
name	Name of theme.
theme	Theme, A json string or a see below.

Details

The function `e_theme_register` can be used to register the theme globally in R markdown or shiny (UI). This is useful because 1) the `e_theme_custom` registers the theme every time and is more computationally expensive.

Functions

- `e_theme` - Use a default theme by name.
- `e_theme_custom` - Use a custom theme.
- `e_theme_register` - Register a theme globally in shiny or R markdown.

Theme names

- default
- dark
- vintage
- westeros
- essos
- wonderland
- walden
- chalk
- infographic

- macarons
- roma
- shine
- purple-passion
- halloween
- auritus
- azul
- bee-inspired
- blue
- caravan
- carp
- cool
- dark-blue
- dark-bold
- dark-digerati
- dark-fresh-cut
- dark-mushroom
- eduardo
- forest
- fresh-cut
- fruit
- gray
- green
- helianthus
- inspired
- jazz
- london
- macarons
- macarons2
- mint
- red
- red-velvet
- royal
- sakura
- tech-blue

See Also

[create your own theme.](#)

Examples

```
mtcars %>%
  e_charts(mpg) %>%
  e_line(displ) %>%
  e_area(hp) %>%
  e_x_axis(min = 10) -> p

p %>% e_theme("chalk")
p %>% e_theme_custom('{"color":["#ff715e", "#ffaf51"]}')
```

e_title	<i>Title</i>
---------	--------------

Description

Add title.

Usage

```
e_title(e, text = NULL, subtext = NULL, link = NULL, sublink = NULL, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
text, subtext	Title and Subtitle.
link, sublink	Title and Subtitle link.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
quakes %>%
  dplyr::mutate(mag = exp(mag) / 60) %>%
  e_charts(stations) %>%
  e_scatter(depth, mag) %>%
  e_visual_map(min = 3, max = 7) %>%
  e_title("Quakes", "Stations and Magnitude")
```

e_toolbox_feature *Toolbox*

Description

Add toolbox interface.

Usage

```
e_toolbox_feature(e, feature, ...)
```

```
e_toolbox(e, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
feature	Feature to add, defaults to all.
...	Any other option to pass, check See Also section.

Details

Valid feature:

- saveAsImage
- brush
- restore
- dataView
- dataZoom
- magicType

See Also

[Additional arguments](#)

Examples

```
USArrests %>%
  e_charts(UrbanPop) %>%
  e_line(Assault) %>%
  e_area(Murder, y_index = 1, x_index = 1) %>%
  e_datazoom(x_index = 0)
```

```
mtcars %>%
  dplyr::mutate(model = row.names(.)) %>%
  e_charts(model) %>%
  e_line(qsec) %>%
  e_toolbox() %>%
```

```
e_toolbox_feature(  
  feature = "magicType",  
  type = list("line", "bar")  
)
```

e_tooltip

Tooltip

Description

Customise tooltip

Usage

```
e_tooltip(e, trigger = c("item", "axis"), formatter = NULL, ...)
```

```
e_tooltip_item_formatter(  
  style = c("decimal", "percent", "currency"),  
  digits = 0,  
  locale = NULL,  
  currency = "USD"  
)
```

```
e_tooltip_choro_formatter(  
  style = c("decimal", "percent", "currency"),  
  digits = 0,  
  locale = NULL,  
  currency = "USD"  
)
```

```
e_tooltip_pie_formatter(  
  style = c("decimal", "percent", "currency"),  
  digits = 0,  
  locale = NULL,  
  currency = "USD",  
  ...  
)
```

```
e_tooltip_pointer_formatter(  
  style = c("decimal", "percent", "currency"),  
  digits = 0,  
  locale = NULL,  
  currency = "USD"  
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
trigger	What triggers the tooltip, one of item or item.
formatter	Item and Pointer formatter as returned by e_tooltip_item_formatter , e_tooltip_pointer_formatter , e_tooltip_pie_formatter .
...	Any other option to pass, check See Also section.
style	Formatter style, one of decimal, percent, or currency.
digits	Number of decimals.
locale	Locale, if NULL then it is inferred from <code>Sys.getlocale</code> .
currency	Currency to to display.

Formatters

- [e_tooltip_pie_formatter](#): special helper for [e_pie](#).
- [e_tooltip_item_formatter](#): general helper, this is passed to the `tooltip` [formatter](#).
- [e_tooltip_pointer_formatter](#): helper for pointer, this is passed to the `label` [parameter](#) under `axisPointer`.

See Also

[Additional arguments](#)

Examples

```
# basic
USArrests %>%
  e_charts(Assault) %>%
  e_scatter(Murder) %>%
  e_tooltip()

# formatter
cars %>%
  dplyr::mutate(
    dist = dist / 120
  ) %>%
  e_charts(speed) %>%
  e_scatter(dist, symbol_size = 5) %>%
  e_tooltip(
    formatter = e_tooltip_item_formatter("percent")
  )

# axis pointer
cars %>%
  e_charts(speed) %>%
  e_scatter(dist, symbol_size = 5) %>%
  e_tooltip(
    formatter = e_tooltip_pointer_formatter("currency"),
    axisPointer = list(
```



```

    type = "cross"
  )
)

```

e_tree

Tree

Description

Build a tree.

Usage

```
e_tree(e, parent, child, rm_x = TRUE, rm_y = TRUE, ...)
```

```
e_tree_(e, parent, child, rm_x = TRUE, rm_y = TRUE, ...)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
parent, child	Edges.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```

df <- data.frame(
  parent = c("earth", "earth", "forest", "forest", "ocean", "ocean", "ocean", "ocean"),
  child = c("ocean", "forest", "tree", "sasquatch", "fish", "seaweed", "mantis shrimp", "sea monster")
)

df %>%
  e_charts() %>%
  e_tree(parent, child)

```

e_treemap

*Treemap***Description**

Build a treemap.

Usage

```
e_treemap(e, parent, child, value, itemStyle, rm_x = TRUE, rm_y = TRUE, ...)
```

```
e_treemap_(
  e,
  parent,
  child,
  value,
  itemStyle = NULL,
  rm_x = TRUE,
  rm_y = TRUE,
  ...
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
parent, child	Edges.
value	Value of edges.
itemStyle	Name of column containing styles to pass to child.
rm_x, rm_y	Whether to remove x and y axis, defaults to TRUE.
...	Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
df <- data.frame(
  parent = c("earth", "earth", "earth", "mars", "mars"),
  child = c("forest", "ocean", "iceberg", "elon", "curiosity"),
  value = ceiling(rnorm(5, 10, 2))
)

df %>%
  e_charts() %>%
  e_treemap(parent, child, value)
```

e_utc	<i>Use UTC</i>
-------	----------------

Description

Use UTC

Usage

```
e_utc(e)
```

Arguments

e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).

e_visual_map	<i>Visual Map</i>
--------------	-------------------

Description

Visual Map

Usage

```
e_visual_map(  
  e,  
  serie,  
  calculable = TRUE,  
  type = c("continuous", "piecewise"),  
  scale = NULL,  
  ...  
)  
  
e_visual_map_(  
  e,  
  serie = NULL,  
  calculable = TRUE,  
  type = c("continuous", "piecewise"),  
  scale = NULL,  
  ...  
)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
serie	Column name of serie to scale against.
calculable	Whether show handles, which can be dragged to adjust "selected range".
type	One of continuous or piecewise.
scale	A function that takes a vector of numeric and returns a vector of numeric of the same length.
...	Any other option to pass, check See Also section.

Scaling function

defaults to `e_scale` which is a basic function that rescales size between 1 and 20 for that makes for decent sized points on the chart.

See Also

[Additional arguments](#)

Examples

```
# scaled data
mtcars %>%
  e_charts(mpg) %>%
  e_scatter(wt, qsec, scale = e_scale) %>%
  e_visual_map(qsec, scale = e_scale)

# dimension
# color according to y axis
mtcars %>%
  e_charts(mpg) %>%
  e_scatter(wt) %>%
  e_visual_map(wt, dimension = 1)

# color according to x axis
mtcars %>%
  e_charts(mpg) %>%
  e_scatter(wt) %>%
  e_visual_map(mpg, dimension = 0)

v <- LETTERS[1:10]
matrix <- data.frame(
  x = sample(v, 300, replace = TRUE),
  y = sample(v, 300, replace = TRUE),
  z = rnorm(300, 10, 1),
  color = rnorm(300, 10, 1),
  size = rnorm(300, 10, 1),
  stringsAsFactors = FALSE
) %>%
dplyr::group_by(x, y) %>%
dplyr::summarise(
```

```

      z = sum(z),
      color = sum(color),
      size = sum(size)
    ) %>%
    dplyr::ungroup()

matrix %>%
  e_charts(x) %>%
  e_scatter_3d(y, z, color, size) %>%
  e_visual_map(
    z, # scale to z
    inRange = list(symbolSize = c(1, 30)), # scale size
    dimension = 3 # third dimension 0 = x, y = 1, z = 2, size = 3
  ) %>%
  e_visual_map(
    z, # scale to z
    inRange = list(color = c('#bf444c', '#d88273', '#f6efa6')), # scale colors
    dimension = 4, # third dimension 0 = x, y = 1, z = 2, size = 3, color = 4
    bottom = 300 # padding to avoid visual maps overlap
  )

```

e_visual_map_range *Select Visual Map*

Description

Selects data range of visual mapping.

Usage

```
e_visual_map_range(e, ..., btn = NULL)
```

Arguments

e	An echarts4r object as returned by <code>e_charts</code> or a proxy as returned by <code>echarts4rProxy</code> .
...	Any options, see official documentation
btn	A <code>e_button</code> id.

Examples

```

data("state")

as.data.frame(state.x77) %>%
  e_charts(Population) %>%
  e_scatter(Income, Frost) %>%
  e_visual_map(Frost, scale = e_scale) %>%
  e_legend(FALSE) %>%
  e_visual_map_range(

```

```

        selected = list(60, 120)
    )

```

e_zoom	<i>Zoom</i>
--------	-------------

Description

Zoom on a region.

Usage

```
e_zoom(e, ..., btn = NULL)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
...	Any options, see official documentation
btn	A e_button id.

Examples

```

cars %>%
  e_charts(dist) %>%
  e_scatter(speed) %>%
  e_datazoom() %>%
  e_zoom(
    dataZoomIndex = 0,
    start = 20,
    end = 40,
    btn = "BUTTON"
  ) %>%
  e_button("BUTTON", "Zoom in")

```

graph_action	<i>Nodes Adjacency</i>
--------------	------------------------

Description

Actions related to [e_graph](#).

Usage

```

e_focus_adjacency(e, ..., btn = NULL)

e_unfocus_adjacency(e, ..., btn = NULL)

```

Arguments

`e` An echarts4r object as returned by `e_charts` or a proxy as returned by `echarts4rProxy`.
`...` Any options, see [official documentation](#)
`btn` A `e_button` id.

Examples

```
value <- rnorm(10, 10, 2)

nodes <- data.frame(
  name = sample(LETTERS, 10),
  value = value,
  size = value,
  grp = rep(c("grp1", "grp2"), 5),
  stringsAsFactors = FALSE
)

edges <- data.frame(
  source = sample(nodes$name, 20, replace = TRUE),
  target = sample(nodes$name, 20, replace = TRUE),
  stringsAsFactors = FALSE
)

e_charts() %>%
  e_graph() %>%
  e_graph_nodes(nodes, name, value, size, grp) %>%
  e_graph_edges(edges, source, target) %>%
  e_focus_adjacency(
    seriesIndex = 0,
    dataIndex = 4
  )
```

highlight_action	<i>Highlight & Downplay</i>
------------------	---------------------------------

Description

Highlight series

Usage

```
e_highlight(e, series_index = NULL, series_name = NULL, btn = NULL)

e_downplay(e, series_index = NULL, series_name = NULL, btn = NULL)
```

Arguments

`e` An echarts4r object as returned by `e_charts` or a proxy as returned by `echarts4rProxy`.
`series_index, series_name` Index or name of serie to highlight or list or vector of series.
`btn` A `e_button` id.

Examples

```
iris %>%
  group_by(Species) %>%
  e_charts(Sepal.Length) %>%
  e_line(Sepal.Width) %>%
  e_line(Petal.Length) %>%
  e_highlight(series_name = "setosa") # highlight group
```

init	<i>Initialise</i>
------	-------------------

Description

Initialise a chart.

Usage

```
e_charts(
  data,
  x,
  width = NULL,
  height = NULL,
  elementId = NULL,
  dispose = TRUE,
  draw = TRUE,
  renderer = "canvas",
  timeline = FALSE,
  ...,
  reorder = TRUE
)
```

```
e_charts_(
  data,
  x = NULL,
  width = NULL,
  height = NULL,
  elementId = NULL,
  dispose = TRUE,
  draw = TRUE,
```



```

    renderer = "canvas",
    timeline = FALSE,
    ...,
    reorder = TRUE
  )

e_chart(
  data,
  x,
  width = NULL,
  height = NULL,
  elementId = NULL,
  dispose = TRUE,
  draw = TRUE,
  renderer = "canvas",
  timeline = FALSE,
  ...,
  reorder = TRUE
)

e_data(e, data, x)

```

Arguments

data	A data.frame.
x	Column name containing x axis.
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.
elementId	Id of element.
dispose	Set to TRUE to force redraw of chart, set to FALSE to update.
draw	Whether to draw the chart, intended to be used with e_draw_p .
renderer	Renderer, takes canvas (default) or svg.
timeline	Set to TRUE to build a timeline, see timeline section.
...	Any other argument.
reorder	Set the FALSE to not reorder numeric x axis values.
e	An object of class <code>echarts4r</code> as returned by <code>e_charts</code> .

Timeline

The timeline feature currently supports the following chart types.

- [e_bar](#)
- [e_line](#)
- [e_step](#)
- [e_area](#)

- `e_scatter`
- `e_effect_scatter`
- `e_candle`
- `e_heatmap`
- `e_pie`
- `e_line_3d`
- `e_lines_3d`
- `e_bar_3d`
- `e_lines`
- `e_scatter_3d`
- `e_scatter_gl`
- `e_histogram`
- `e_lm`
- `e_loess`
- `e_glm`
- `e_density`
- `e_pictorial`
- `e_boxplot`
- `e_map`
- `e_map_3d`
- `e_line_3d`
- `e_gauge`

Examples

```
mtcars %>%  
  e_charts(qsec) %>%  
  e_line(mpg)  
  
points <- mtcars[1:3,]  
mtcars %>%  
  e_charts_("qsec") %>%  
  e_line(mpg) %>%  
  e_data(points, qsec) %>%  
  e_scatter(mpg, color = "blue")
```

legend_action	<i>Legend</i>
---------------	---------------

Description

Legend

Usage

```
e_legend_select(e, name, btn = NULL)
e_legend_unselect(e, name, btn = NULL)
e_legend_toggle_select(e, name, btn = NULL)
e_legend_scroll(e, scroll_index = NULL, legend_id = NULL, btn = NULL)
```

Arguments

<code>e</code>	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
<code>name</code>	Legend name.
<code>btn</code>	A e_button id.
<code>scroll_index</code>	Control the scrolling of legend when type = "scroll" in <code>e_legend</code> .
<code>legend_id</code>	Id of legend.

Examples

```
e <- C02 %>%
  group_by(Type) %>%
  e_charts(conc) %>%
  e_scatter(uptake)

e %>%
  e_legend_unselect("Quebec")

e %>%
  e_legend_unselect("Quebec", btn = "btn") %>%
  e_button("btn", "Quebec")
```

mapbox

Mapbox

Description

Use mapbox.

Usage

```
e_mapbox(e, token, ...)
```

Arguments

<code>e</code>	An <code>echarts4r</code> object as returned by <code>e_charts</code> or a proxy as returned by <code>echarts4rProxy</code> .
<code>token</code>	Your mapbox token from mapbox .
<code>...</code>	Any option.

Note

Mapbox may not work properly in the RSudio console.

See Also

[Official documentation](#), [mapbox documentation](#)

Examples

```
## Not run:
url <- paste0("https://ecomfe.github.io/echarts-examples/",
             "public/data-gl/asset/data/population.json")
data <- jsonlite::fromJSON(url)
data <- as.data.frame(data)
names(data) <- c("lon", "lat", "value")

data %>%
  e_charts(lon) %>%
  e_mapbox(
    token = "YOUR_MAPBOX_TOKEN",
    style = "mapbox://styles/mapbox/dark-v9"
  ) %>%
  e_bar_3d(lat, value, coord_system = "mapbox") %>%
  e_visual_map()

## End(Not run)
```

`map_actions`*Map Actions*

Description

Map-related actions.

Usage

```
e_map_select(e, ..., btn = NULL)
```

```
e_map_unselect(e, ..., btn = NULL)
```

```
e_map_toggle_select(e, ..., btn = NULL)
```

Arguments

<code>e</code>	An echarts4r object as returned by <code>e_charts</code> or a proxy as returned by <code>echarts4rProxy</code> .
<code>...</code>	Any options, see official documentation
<code>btn</code>	A <code>e_button</code> id.

See Also

[e_map_register](#)

Examples

```
choropleth <- data.frame(  
  countries = c(  
    "France", "Brazil", "China", "Russia", "Canada", "India", "United States",  
    "Argentina", "Australia"  
  ),  
  values = round(runif(9, 10, 25))  
)
```

```
choropleth %>%  
  e_charts(countries) %>%  
  e_map(values) %>%  
  e_visual_map(min = 10, max = 25) %>%  
  e_map_toggle_select(name = "China", btn = "btn") %>%  
  e_button("btn", "Select China")
```

pie_action	<i>Select & Unselect Pie</i>
------------	----------------------------------

Description

Actions related to [e_pie](#).

Usage

```
e_pie_select(e, ..., btn = NULL)
```

```
e_pie_unselect(e, ..., btn = NULL)
```

Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
...	Any options, see official documentation
btn	A e_button id.

Examples

```
mtcars %>%
  head() %>%
  dplyr::mutate(model = row.names(.)) %>%
  e_charts(model) %>%
  e_pie(carb) %>%
  e_pie_select(dataIndex = 0)
```

radius_axis	<i>Radius axis</i>
-------------	--------------------

Description

Customise radius axis.

Usage

```
e_radius_axis(e, serie, show = TRUE, ...)
```

```
e_radius_axis_(e, serie = NULL, show = TRUE, ...)
```

Arguments

- e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).
- serie Serie to use as axis labels.
- show Whether to display the axis.
- ... Any other option to pass, check See Also section.

See Also

[Additional arguments](#)

Examples

```
df <- data.frame(x = LETTERS[1:10], y = seq(1, 20, by = 2))

df %>%
  e_charts(x) %>%
  e_polar() %>%
  e_angle_axis() %>%
  e_radius_axis(x) %>%
  e_bar(y, coord.system = "polar")
```

timeline-opts

Timeline

Description

Set timeline options

Usage

```
e_timeline_opts(e, axis_type = "category", ...)

e_timeline_serie(e, ..., index = 1)

e_timeline_on_serie(e, ..., serie_index)
```

Arguments

- e An echarts4r object as returned by [e_charts](#) or a proxy as returned by [echarts4rProxy](#).
- axis_type Type of axis, time, value, or category.
- ... Named options.
- index The index of the element to apply options to, see examples.
- serie_index The index of the serie to add elements to.

Functions

- `e_timeline_opts`: Pass general timeline options, see [official documentation](#).
- `e_timeline_serie`: Pass options to each serie, each options *must* be a vector or list the same length as their are steps, see examples.
- `e_timeline_make`: Helper function that wraps your data and `e_timeline_serie` to dynamically add options to series.

Examples

```
# general options
iris %>%
  group_by(Species) %>%
  e_charts(Sepal.Length, timeline = TRUE) %>%
  e_line(Sepal.Width) %>%
  e_timeline_opts(
    autoPlay = TRUE,
    rewind = TRUE
  )

# serie options
iris %>%
  group_by(Species) %>%
  e_charts(Sepal.Length, timeline = TRUE) %>%
  e_line(Sepal.Width) %>%
  e_timeline_serie(
    title = list(
      list(text = "setosa"),
      list(text = "versicolor"),
      list(text = "virginica")
    )
  )
)
```

tooltip_action	<i>Show & Hide Tooltip</i>
----------------	--------------------------------

Description

Show or hide tooltip.

Usage

```
e_showtip(e, ..., btn = NULL)
```

```
e_hidetip(e, ..., btn = NULL)
```


Arguments

e	An echarts4r object as returned by e_charts or a proxy as returned by echarts4rProxy .
...	Any options, see official documentation
btn	A e_button id.

Note

The tooltip must be initialised with [e_tooltip](#) for this to work.

Examples

```
cars %>%
  e_charts(dist) %>%
  e_scatter(speed) %>%
  e_tooltip() %>%
  e_hidetip(btn = "btn") %>%
  e_button("btn", "Hide tooltip")
```

Index

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