ggplot2 Theme System Cheatsheet

Roadmap of the most commonly used Theme Elements in ggplot2

ggplot2 version 3.3.5
@TheDataInkLab

a) ③

This is the title ①

This is a subtitle ②

Automatic ⑦ ⑪ Manual ⑬ ⑭

⑧ ⑫ ⑯

wt ⑨ ⑩ mpg

mpg

⑮ 15
20
⑰ 25
30

⑲ 10 15 20 25 30 35 ⑱

⑳ 10 15 20 25 30 35

㉑

mpg

This is the caption ⑤

⑥

㉒
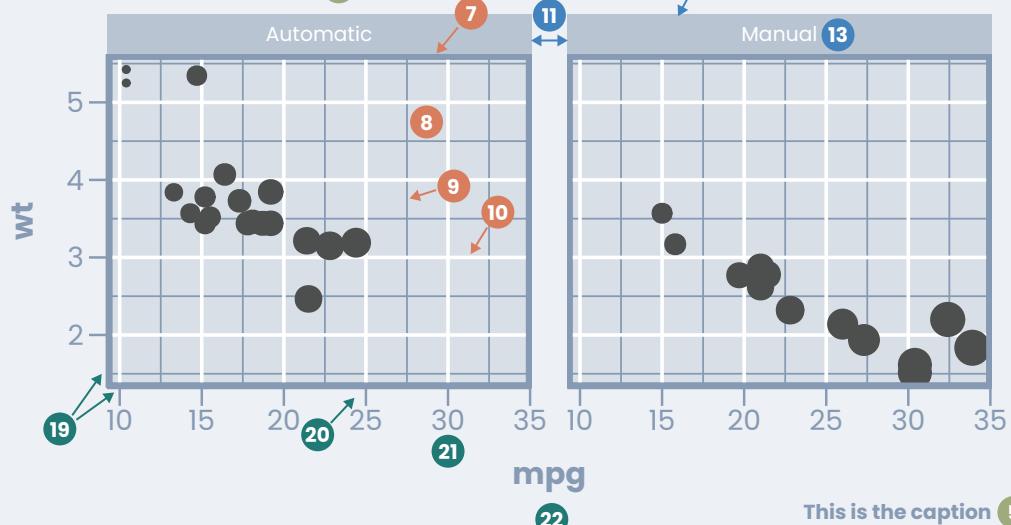
Element functions

element_text()

(font) family
(font) face
(font) colour
(font) size (in points)
hjust [0..1] (0=left, 1=right)
vjust [0..1] (0=bottom, 1=top)
angle (in degrees)
lineheight (as ratio of fontcase)
margin
  margin (t, r, b, l)
  #remember trouble

element_line()

(line) colour
size (width of line)
linetype
  An integer (0:8)
  A name ("blank", "solid",
  "dashed", "dotted", "dotdash",
  "longdash", "twodash")
lineend
  "round", "butt", "square"
arrow
  An arrow specification: arrow()

element_rect()

fill
colour
size (width of border)
linetype (of border) (see element_line)

element_blank()

Eliminates element
Doesn't take parameters

Plot elements

① plot.title
element_text()

② plot.subtitle
element_text()

③ plot.tag
element_text()

plot.tag.position
"topleft", "top", "topright",
"left", "right", "bottomleft",
"bottom", "bottomright"
or a coordinate

④ plot.background
element_rect()

⑤ plot.caption
element_text()

⑥ plot.margin
margin()

Panel elements

⑦ panel.border
element_rect()

⑧ panel.background
element_rect()

⑨ panel.grid.minor
element_line()

⑩ panel.grid.major
element_line()

· aspect.ratio
numeric

Facet elements

⑪ panel.spacing
unit()

⑫ strip.background
element_rect()

⑬ strip.text
element_text()

Legend elements

⑭ legend.background
element_rect()

⑮ legend.key
element_rect()

⑯ legend.title
element_text()

legend.title.align
Numeric between 0 to 1,
where: 0=left, 1=right

⑰ legend.text
element_text()

legend.text.align
Numeric between 0 to 1,
where: 0=left, 1=right

⑱ legend.margin
margin()

· legend.position
"none", "left", "right", "bottom", "top",
or two-element numeric vector

Axis elements

⑲ axis.line
element_line()

⑳ axis.ticks
element_line()

axis.ticks.length
unit()

㉑ axis.text
element_text()

㉒ axis.title
element_text()

Global

These affect all elements of same type in the
plot. Useful to define defaults.

text
element_text()

rect
element_rect()

line
element_text()

title
element_text()

Note.

Of those elements that have two
components, the way to access is
by appending .x or .y at the end.
e.g. axis.line.y will change only the
"y" axis line. Idem with "x". If nothing
is specified (e.g axis.line), both
elements (x and y) will be changed.

See the full list of Theme Elements here: https://ggplot2.tidyverse.org/reference/theme.html