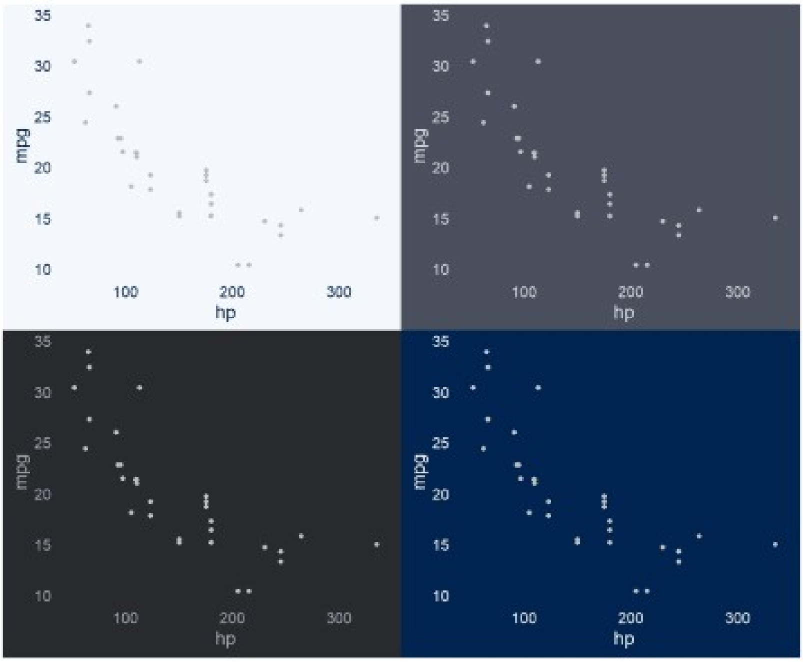
Major new feature: themes

The major focus of version 0.2.0 was adding themes to the package. Let's have a look at them.

```
library(ggcharts)
```

```
## Loading required package: ggplot2
```

```
library(patchwork)
base_plot <- ggplot(mtcars, aes(hp, mpg)) +
  geom_point(color = "gray")
p1 <- base_plot + theme_ggcharts()
p2 <- base_plot + theme_hermit()
p3 <- base_plot + theme_ng()
p4 <- base_plot + theme_nightblue()
p1 + p2 + p3 + p4
```



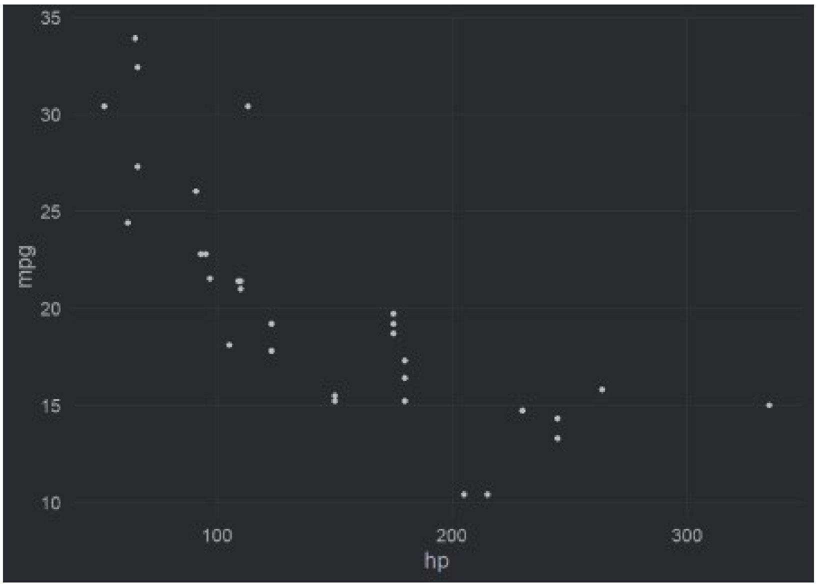
As you can see the themes are very minimal by default. They don't have any axis lines, ticks or grid lines. This is intentional. Different combinations of these parameters work best for different plots. You should make a conscious decision which to use rather than relying on some arbitrary default.

Customize the themes

All `{ggcharts}` themes have a `axis`, `ticks` and `grid` parameter for drawing axis lines, axis ticks and grid lines, respectively. Apart from colors and fonts these are the major style elements of a theme.

Let's have a look how to use those parameters. For the scatter plot I created above grid lines work well.

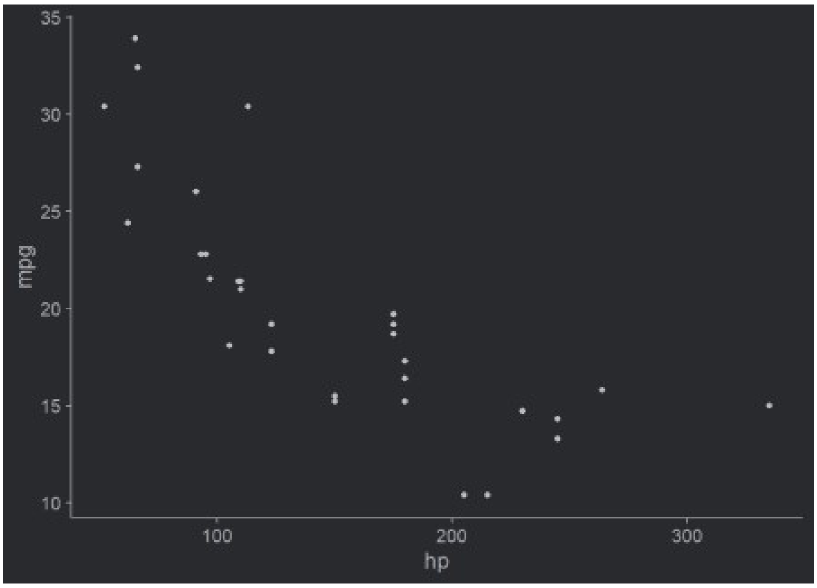
```
base_plot + theme_ng(grid = "XY")
```



Note that I used uppercase "XY" which draws major grid lines. To draw minor grid lines use lowercase "xy"instead.

An alternative option for this scatter plot is to go for axis lines with ticks.

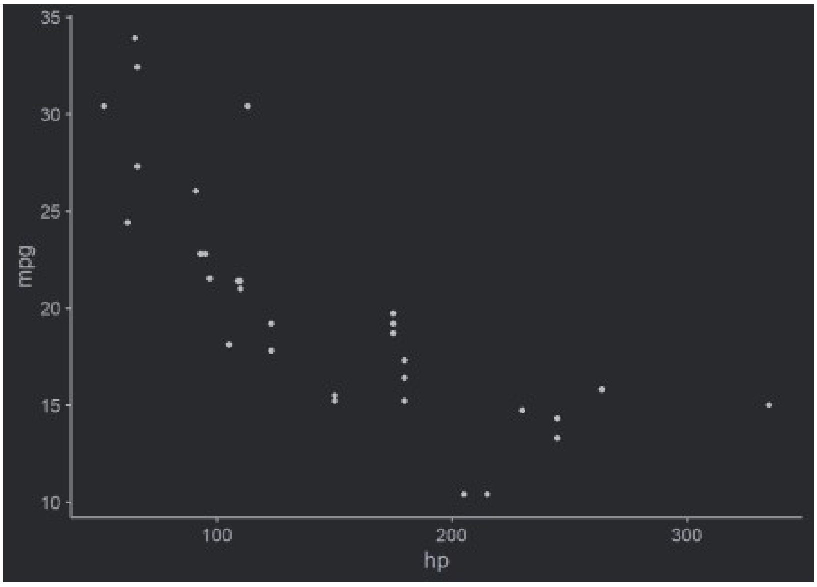
```
base_plot + theme_ng(axis = "xy", ticks = "xy")
```



Easy, isn't it?

The API is inspired by the {hrbrthemes} package. You hopefully agree that it is much easier to tweak the theme this way than using the theme() function. Consider this example which creates the same plot as above but is full of boiler-plate code.

```
base_plot +
  theme_ng() +
  theme(
    axis.line.x = element_line(color = "#A9A9B3"),
    axis.line.y = element_line(color = "#A9A9B3"),
    axis.ticks.x = element_line(color = "#A9A9B3"),
    axis.ticks.y = element_line(color = "#A9A9B3")
  )
```

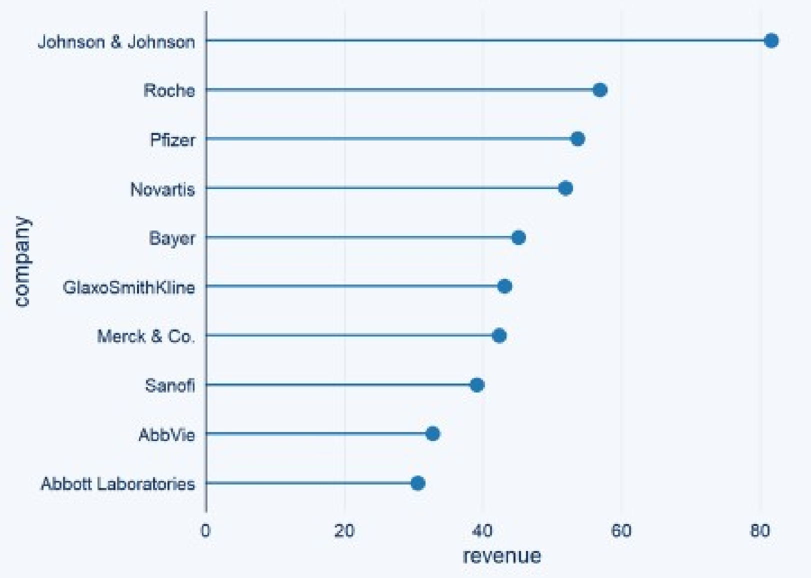


Convinced? Great, let's move on!

Change {ggcharts} theme globally

`{ggcharts}` uses `theme_ggcharts()` by default and sets the `axis`, `ticks` and `grid` arguments automatically depending on the plot.

```
data("biomedicalrevenue")
revenue2018 <- biomedicalrevenue[biomedicalrevenue$year == 2018, ]
lollipop_chart(revenue2018, company, revenue, threshold = 30)
```



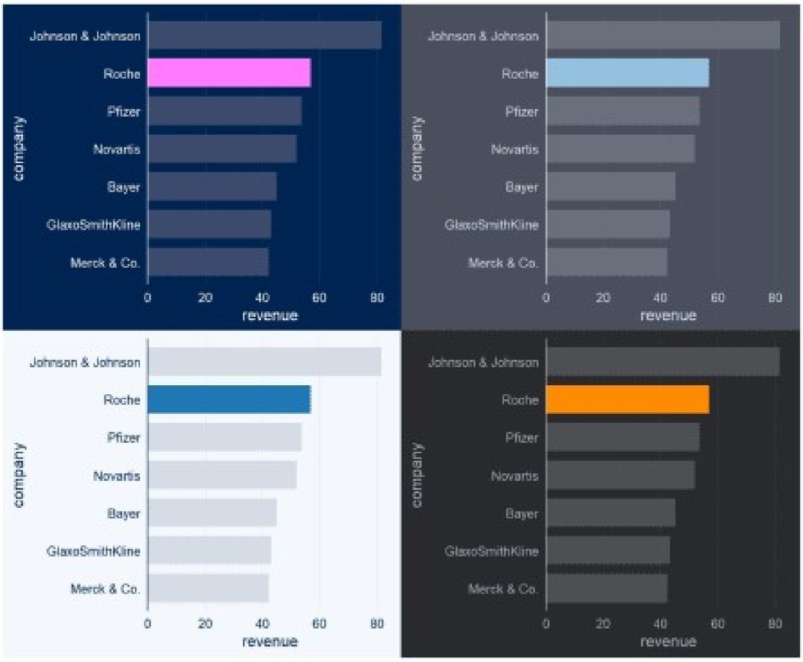
For the horizontal `lollipop_chart()`, `axis = "y"`, `ticks = ""` and `grid = "Y"`.

In addition to the four themes, version 0.2.0 of `{ggcharts}` adds the ability to change the theme globally using `ggchart_set_theme()`. This is similar to `theme_set()` from `{ggplot2}`. Unlike `theme_set()`, though, `ggcharts_set_theme()` takes the name of the theme as a string as its first argument, e.g. `ggcharts_set_theme("theme_hermit")`. Why? Because if you would pass the theme directly it couldn't easily be auto-adjusted depending of the chart.

Setting the theme globally has further advantages. The default color is also changed in sync. This is unlike the `geom` defaults of `{ggplot2}` which remain unchanged if you change the theme. Additionally, if you use the `highlight` parameter the color of the non-highlighted bars is auto-adjusted as well. Here's an example.

```
revenue2018 <- biomedicalrevenue[biomedicalrevenue$year == 2018, ]
```

```
themes <- ggcharts:::ggcharts_list_themes()
bar_charts <- lapply(themes, function(t) {
  ggcharts_set_theme(t, base_size = 12)
  bar_chart(
    revenue2018,
    company,
    revenue,
    highlight = "Roche",
    top_n = 7
  )
})
wrap_plots(bar_charts)
```



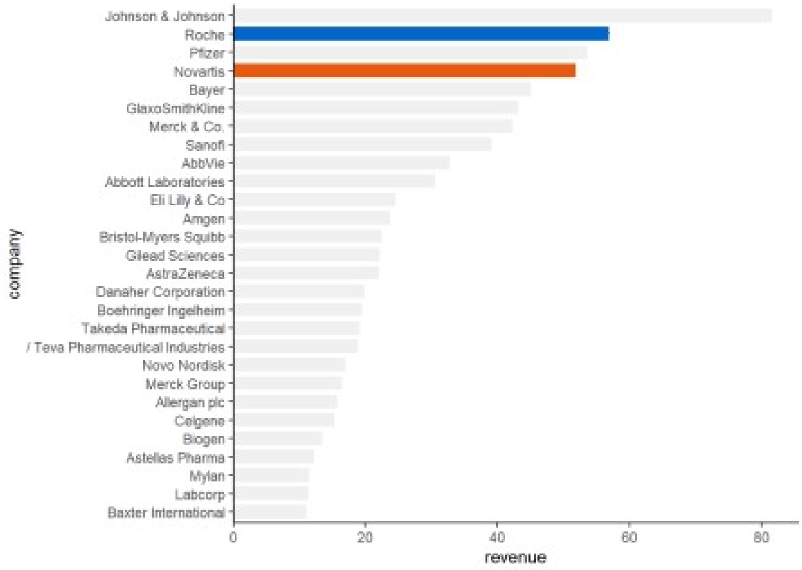
Neat isn’t, it?

Improved highlight feature

Speaking of highlighting, another new feature in version 0.2.0 is `highlight_spec()` which gives you full control over the way in which bars and lollipops are highlighted in `bar_chart()` and `lollipop_chart()`, respectively.

Let’s take the bar chart from above and say you’d like to highlight the bars of `"Roche"` and `"Novartis"` in two different colors and use a lighter gray as the color for the other bars.

```
spec <- highlight_spec(
  what = c("Roche", "Novartis"),
  highlight_color = c("#0066CC", "#E8580F"),
  other_color = "#F0F0F0"
)
bar_chart(revenue2018, company, revenue, highlight = spec) +
  theme_classic()
```



Concluding Remarks

`{ggcharts}` is a work-in-progress and constantly evolving. After the recent CRAN release I already added one new feature: `line_chart()`. If there's something you'd like to see in the package please open an issue on GitHub.

If you haven't already, make sure to install the new `{ggcharts}` release:

```
install.packages("ggcharts")
```