Data Visualization with R
Ggplot2 tutorial (part 2)

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Themes

Theme is used to change the non-data elements of the plot:

Theme	Type	Arguments
axis.title.x	element_text	size, color, family, angle
axis.title.y	element_text	size, color, family, angle
plot.background	element_rect	fill, color, linewidth
panel.background	element_rect	fill, fill, color, line width
panel.grid.major	element_line	color, linetype, linewidth

Type `?theme` to show all possible types of themes, their types and their arguments.

Themes

You can add themes to the plot to customize the non-data elements:

```
p1 <- ggplot(dfn, aes(Genre, WorldGross))
p2 <- p1+ geom_bar(aes(fill=LeadStudio),
                   stat="Identity",
                   position="dodge")
p3 <- p2 + theme(axis.title.x=element_text(size=15),
                 axis.title.y=element_text(size=15),
plot.background=element_rect(fill="gray87"),
panel.background=element_rect(fill="beige"),
panel.grid.major=element_line(color="Gray",
                              linetype=1))
```

Themes

You can use predefined themes:

```
p2 + theme_bw() + ggtitle("theme_bw()")
p2 + theme_classic() + ggtitle("theme_classic()")
p2 + theme_classic() + ggtitle("theme_gray()")
p2 + theme_minimal() + ggtitle("theme_minimal()")
```

Themes

You can also use define your own theme:

```
mytheme <- theme(legend.title=element_blank(),
           legend.position="bottom",
           text=element_text(color="Blue"),
           axis.text=element_text(size=12,
                                  color="Red"),
           axis.title=element_text(size=rel(1.5)))
```

and use it for a single plot:

```
p2 + mytheme + ggtitle("Changed Plot with my theme")
```

or for all the plots by placing it at the beginning of your code:

```
theme_set(my_theme)
```

Themes

You can change the color palette.

Type `?scale_fill_brewer` to see all the color palettes available.

```
p4 <- p2 + theme_bw() + ggtitle("theme_bw()")
p4 + scale_fill_brewer(palette="Spectral")
```