

Graphic Design with ggplot2

Working with Labels and Annotations: Solution Exercise 2

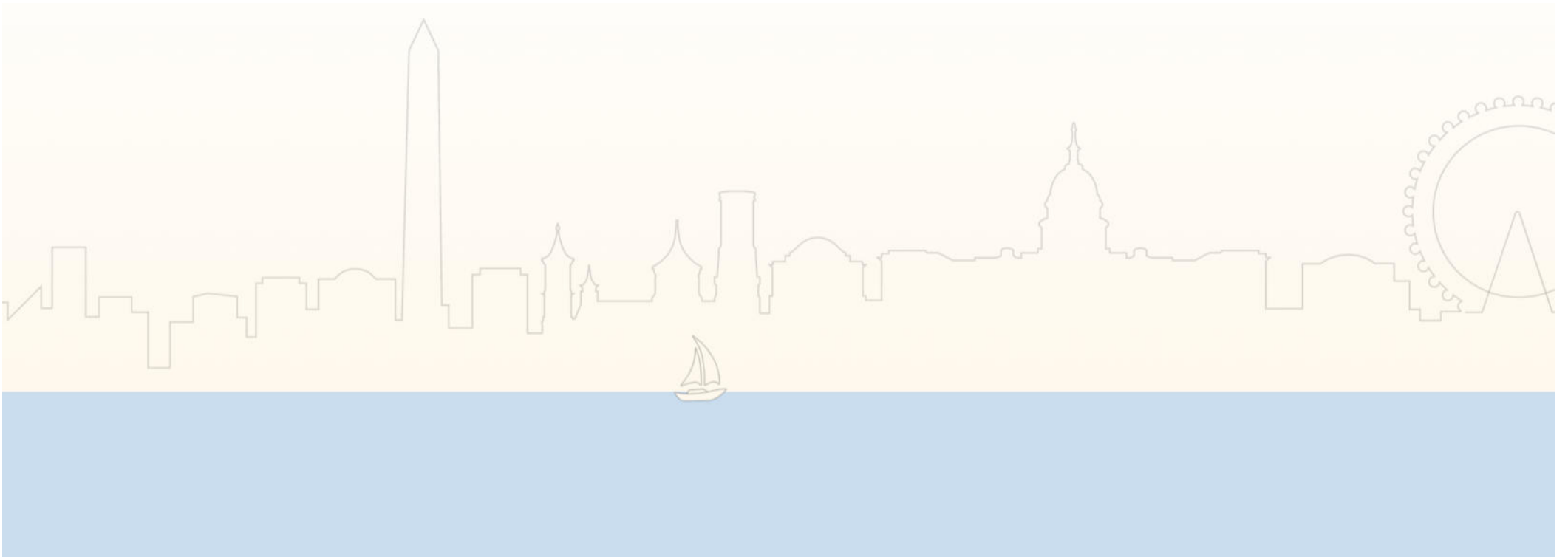
Cédric Scherer // rstudio::conf // July 2022

- Create this logo:



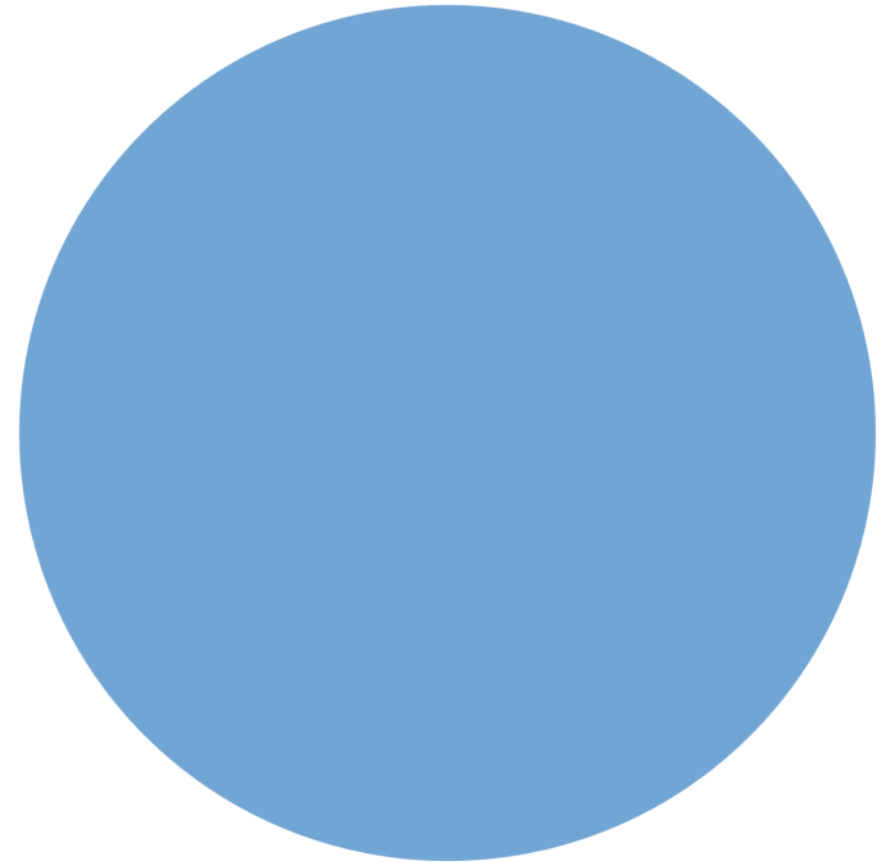
Load and Modify Image

```
1 skyline <- magick::image_read(here::here("materials", "exercises", "img", "rstudioconf-washington-bg  
2  
3 skyline
```



Create a Blue Dot

```
1 library(tidyverse)
2
3 ggplot(mapping = aes(x = 0, y = 0)) +
4   geom_point(
5     color = "#71a5d4", size = 150
6   ) +
7   xlim(-5, 5) +
8   ylim(-5, 5) +
9   theme_void()
```



Add the “R”

```
1 ggplot(mapping = aes(x = 0, y = 0)) +  
2   geom_point(  
3     color = "#71a5d4", size = 150  
4   ) +  
5   geom_text(  
6     label = "R", size = 80,  
7     family = "Tabular",  
8     color = "white"  
9   ) +  
10  xlim(-5, 5) +  
11  ylim(-5, 5) +  
12  theme_void()
```



Add the rstudio::conf Skyline

```
1 ggplot(mapping = aes(x = 0, y = 0)) +  
2   annotation_custom(  
3     grid::rasterGrob(  
4       image = skyline,  
5       x = .5,  
6       y = .5  
7     )  
8   ) +  
9   geom_point(  
10    color = "#71a5d4", size = 150  
11  ) +  
12  geom_text(  
13    label = "R", size = 80,  
14    family = "Tabular",  
15    color = "white"  
16  ) +  
17  xlim(-5, 5) +  
18  ylim(-5, 5) +  
19  theme_void()
```



Position the rstudio::conf Skyline

```
1 ggplot(mapping = aes(x = 0, y = 0)) +  
2   annotation_custom(  
3     grid::rasterGrob(  
4       image = skyline,  
5       x = .5,  
6       y = .1  
7     )  
8   ) +  
9   geom_point(  
10    color = "#71a5d4", size = 150  
11  ) +  
12  geom_text(  
13    label = "R", size = 80,  
14    family = "Tabular",  
15    color = "white"  
16  ) +  
17  xlim(-5, 5) +  
18  ylim(-7.5, 5) +  
19  theme_void()
```



Position the rstudio::conf Skyline

```
1 ggplot(mapping = aes(x = 0, y = 0)) +  
2   annotation_custom(  
3     grid::rasterGrob(  
4       image = skyline,  
5       x = .5,  
6       y = -.2  
7     )  
8   ) +  
9   geom_point(  
10    color = "#71a5d4", size = 150  
11  ) +  
12  geom_text(  
13    label = "R", size = 80,  
14    family = "Tabular",  
15    color = "white"  
16  ) +  
17  coord_cartesian(clip = "off") +  
18  xlim(-5, 5) +  
19  ylim(-5, 5) +  
20  theme_void() +  
21  theme(  
22    plot.margin = margin(t = 30, b = 120)
```



Change Background Color

```
1 ggplot(mapping = aes(x = 0, y = 0)) +  
2   annotation_custom(  
3     grid::rasterGrob(  
4       image = skyline,  
5       x = .5,  
6       y = .1  
7     )  
8   ) +  
9   geom_point(  
10    color = "#71a5d4", size = 150  
11  ) +  
12  geom_text(  
13    label = "R", size = 80,  
14    family = "Tabular",  
15    color = "white"  
16  ) +  
17  xlim(-5, 5) +  
18  ylim(-7.5, 5) +  
19  theme_void() +  
20  theme(  
21    plot.background = element_rect(  
22      fill = "#fffd9", color = "#fffd9"
```



Save the Plot

```
1 ggsave(here::here("exercises", "plots", "05_annotations_ex2.png"),  
2       width = 5, height = 6, dpi = 300)
```



Or: Combine Images with {magick}

```
1 g <- ggplot(mapping = aes(x = 0, y = 0)) +  
2   geom_point(color = "#71a5d4", size = 150) +  
3   geom_text(  
4     label = "R", size = 80,  
5     family = "Tabular", color = "white"  
6   ) +  
7   theme_void() +  
8   theme(plot.background = element_rect(fill = "#fffd9", color = "#fffd9"))
```

```
1 ggsave(plot = g, filename = here::here("exercises", "img", "rstudio-dot.png"),  
2       width = 5, height = 5, dpi = 3600)
```

Or: Combine Images with {magick}

```
1 library(magick)
2
3 dot <- image_read(here::here("exercises", "img", "rstudio-dot.png"))
4 img <- c(dot, skyline)
5 img <- image_append(image_scale(img, "1500"), stack = TRUE)
6 image_write(img, path = here::here("exercises", "plots", "05_annotations_ex2_combined.png"), format
```

