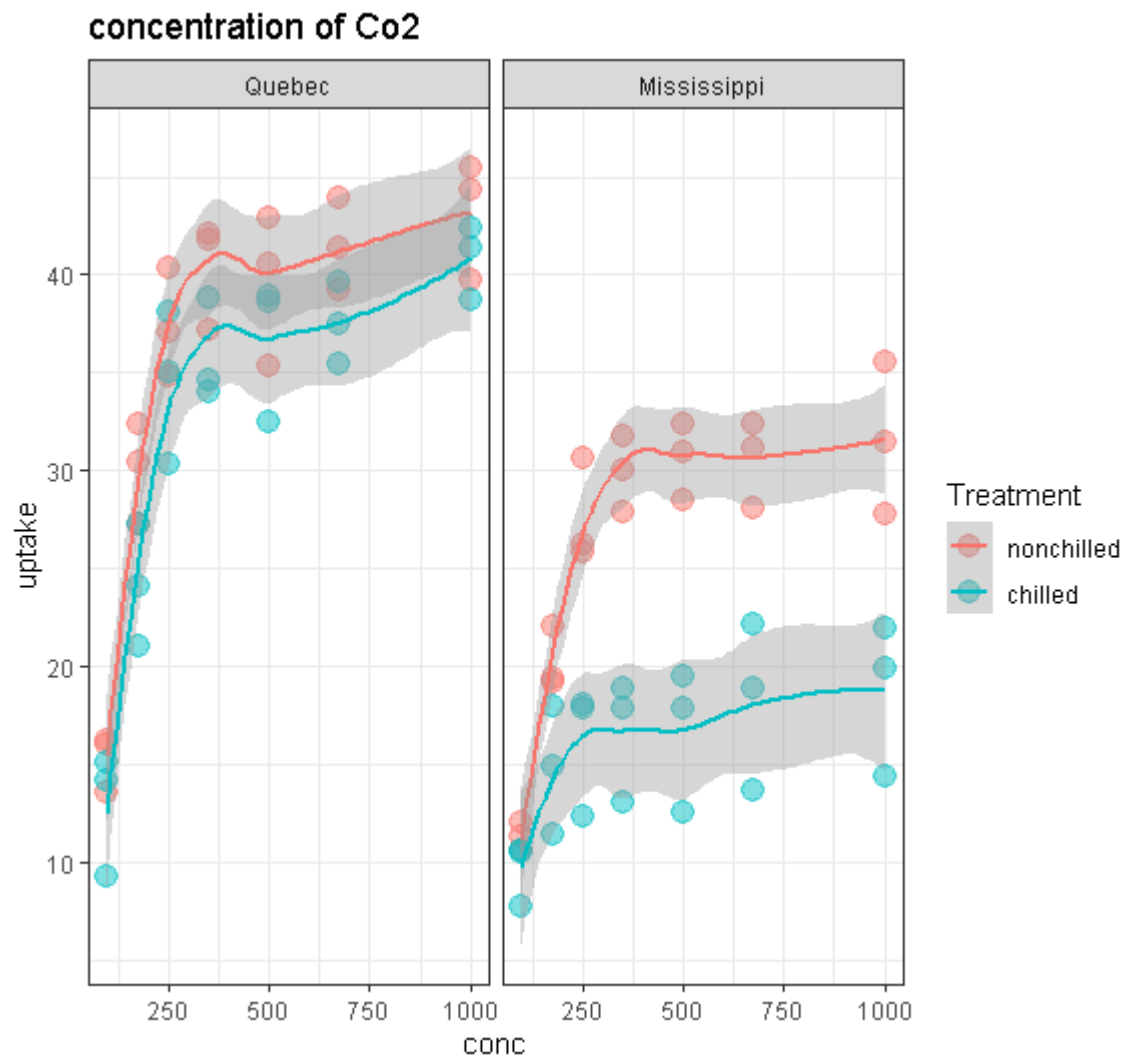


```
rm(PART5)
rm(PART5_IR)
data()
BOD
library(tidyverse)
library(ggplot2)
ggplot(data = BOD,
       mapping = aes(x = Time,
                     y = demand)) + geom_point(size = 5) +
  geom_line(colour = "red")
data()
CO2
#Graph 1:
ggplot(CO2 , aes(conc, uptake, colour = Treatment))+
  geom_point(size = 4, alpha = 0.5)+
  geom_smooth()+ facet_wrap(~Type)+
  labs(title = "concentration of Co2")+
  theme_bw()
```



#Graph 2:

CO2%>%

```
ggplot(aes(Treatment, uptake))+
```

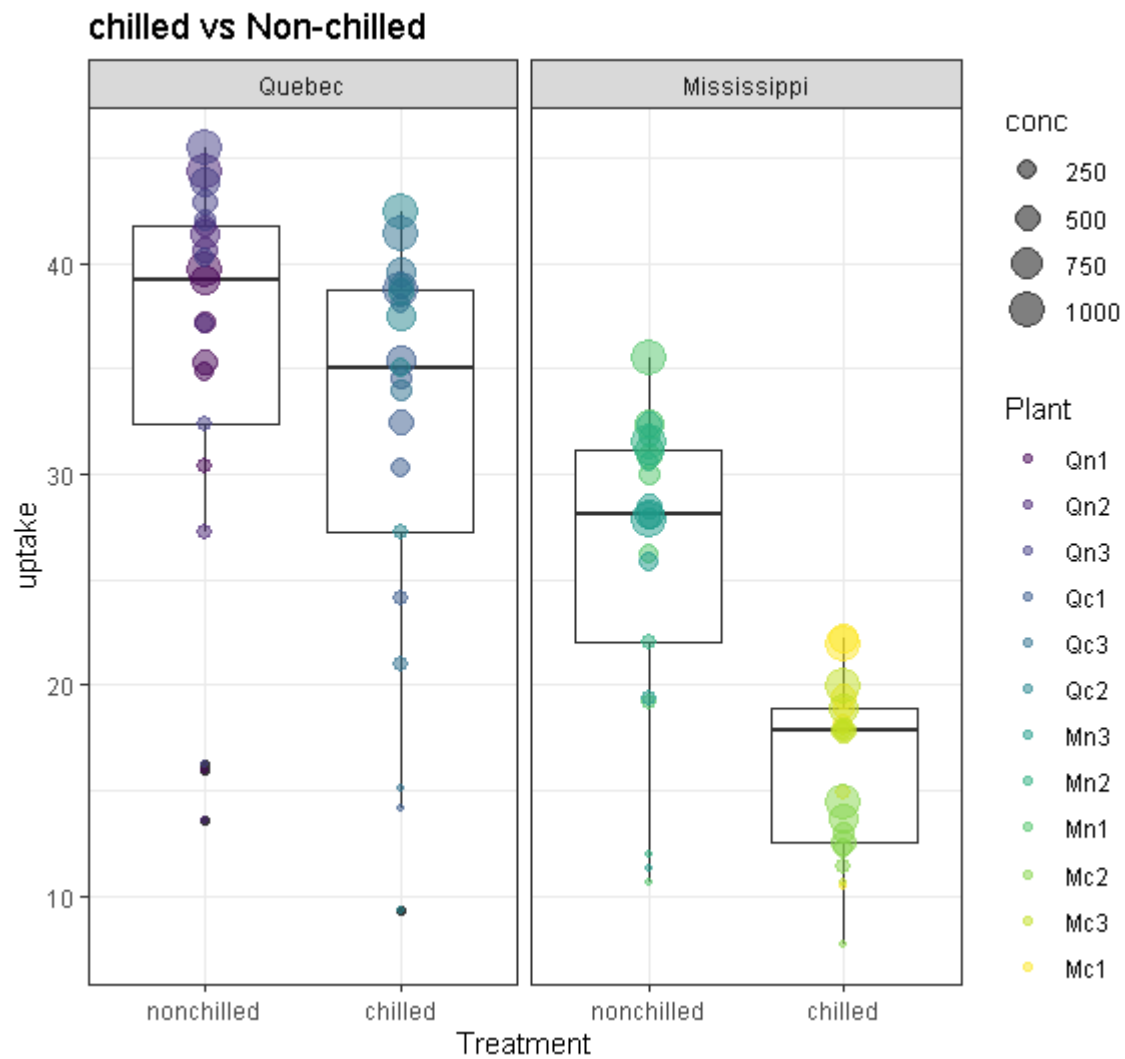
```
geom_boxplot()+
```

```
geom_point(alpha = 0.5, aes(size = conc, colour = Plant))+
```

```
facet_wrap(~Type)+
```

```
theme_bw()+
```

```
labs(title = "chilled vs Non-chilled")
```



#Graph 3:

```
view(mpg)
```

```
mpg%>%
```

```
ggplot(aes(displ, cty))+
```

```
geom_point(aes(colour = drv, size = trans),
```

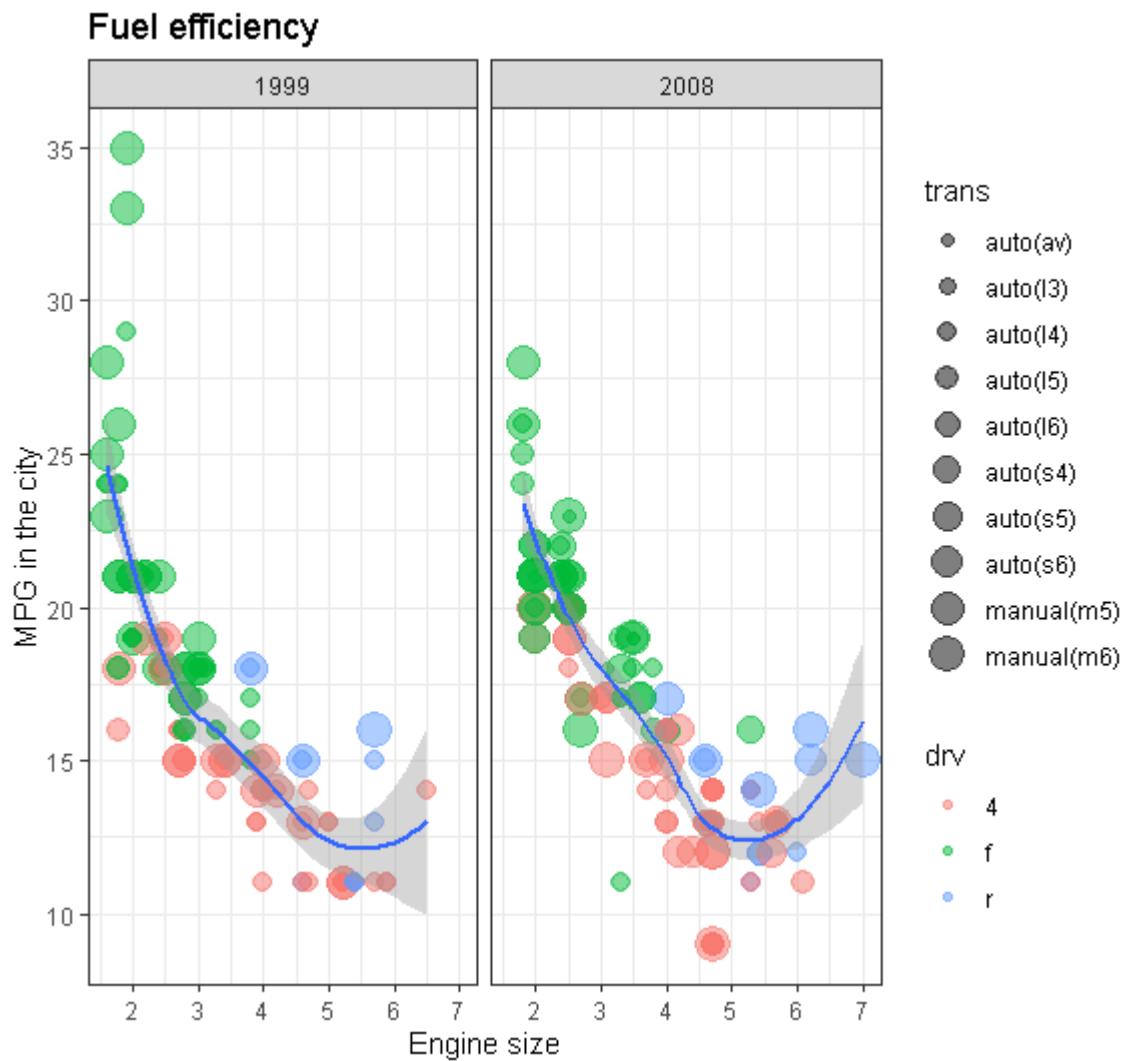
```
alpha = 0.5))+
```

```
geom_smooth()+
```

```
facet_wrap(~year)+ labs(x = "Engine size", y = "MPG in the city",
```

```
title = "Fuel efficiency"))+
```

```
theme_bw()
```



#Graph 4:

```
view(msleep)
```

```
msleep%>%
```

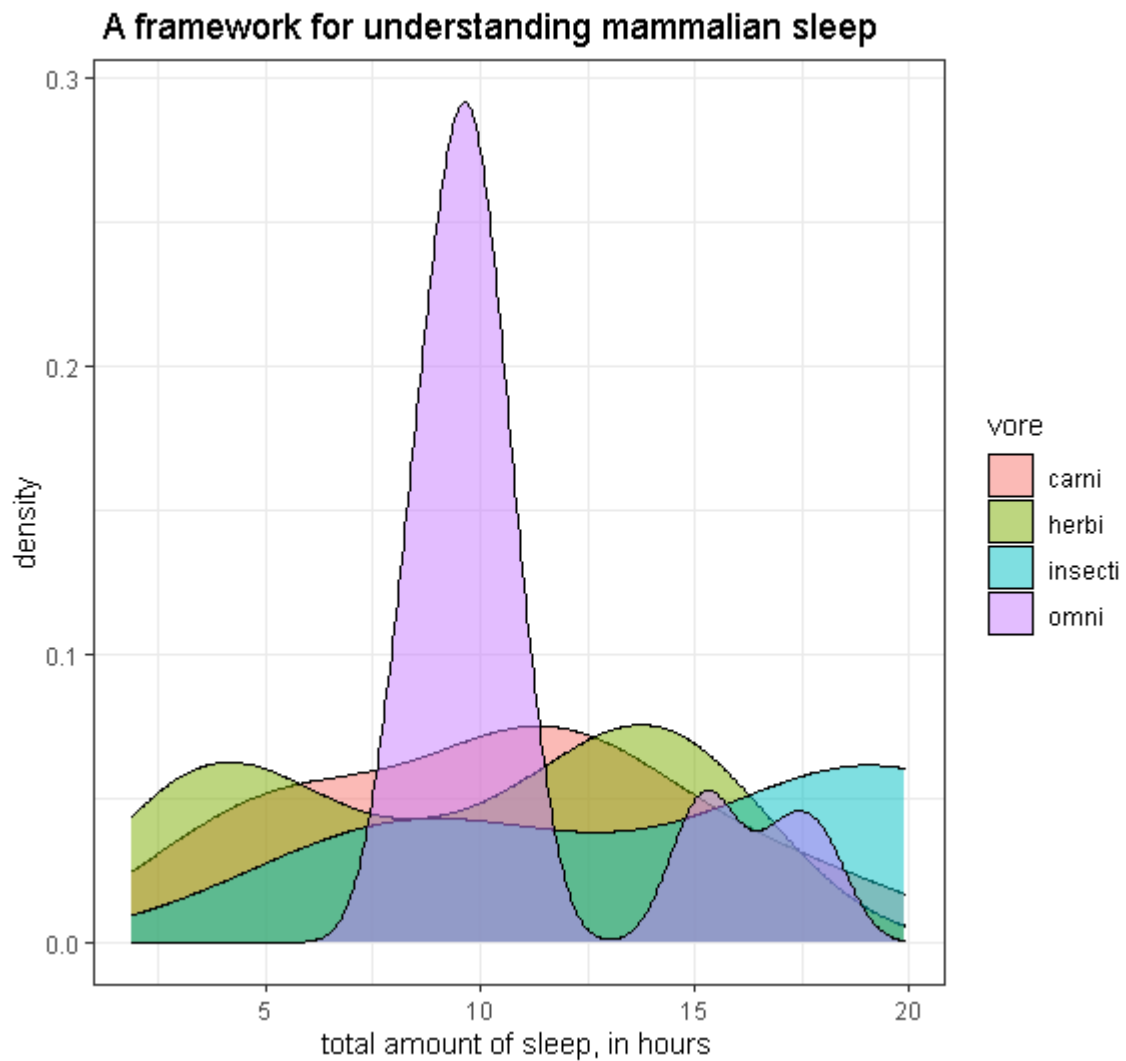
```
drop_na(vore)%>%
```

```
ggplot(aes(sleep_total, fill = vore))+
```

```
geom_density(alpha= 0.5)+
```

```
theme_bw()+ labs(x = "total amount of sleep, in hours",
```

```
title = " A framework for understanding mammalian sleep")
```



```
library(gapminder)
```

```
library(ggplot2)
```

```
library(gganimate)
```

```
gapminder
```

```
P1 <- ggplot(gapminder, aes(gdpPercap, lifeExp, size = pop, colour = country))+
```

```
  geom_point(alpha = 0.7, show.legend = FALSE)+
```

```
  scale_colour_manual(values = country_colors)+
```

```
  scale_size(range = c(2,12))+
```

```
  scale_x_log10()+
```

```
  facet_wrap(~continent)+
```

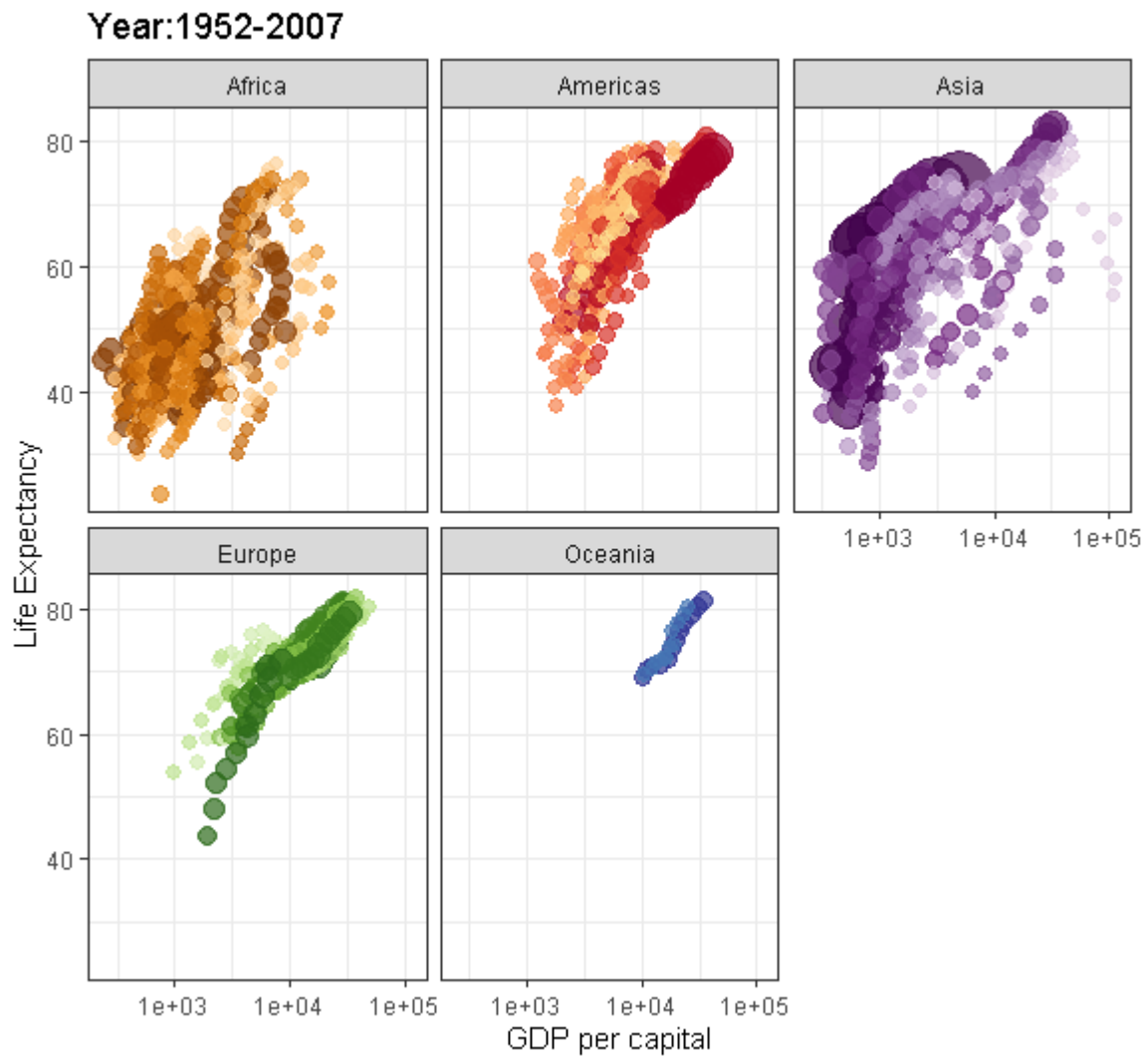
```
labs(title = "Year: Frame_time", x = "GDP per capital", y = "Life Expectancy")+
```

```
  theme_bw()+
```

```

transition_time(year)+
  ease_aes('linear')
animate(P1)
anim_save('plot_gdpPercap_lifeExp.gif')

```



Graphs 6 & 7:

```

library(tidyverse)
library(ggplot2)
library(ggfortify)

mpg %>%
  plot_scatterbar_sd(cyl, hwy)

mpg %>%
  plot_3d_scatterbox(cyl, hwy, class, s_aloha = 0)

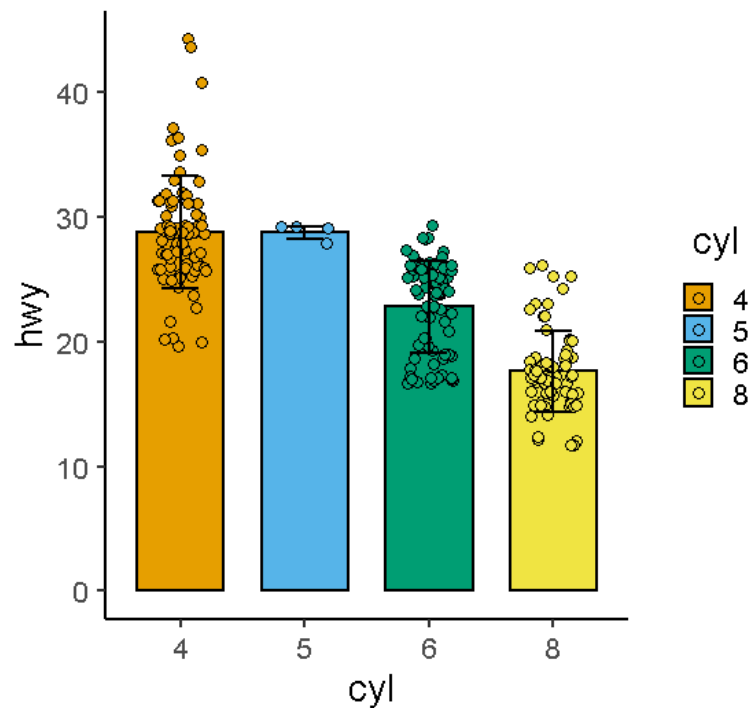
```

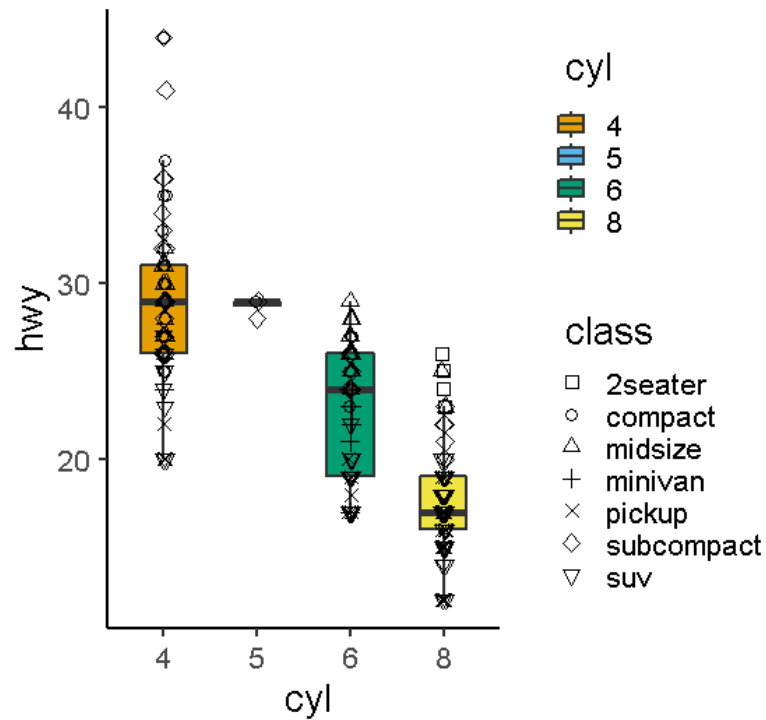
```
mpg%>%
  plot_dotviolin(cyl, hwy, jitter = 0.2, s_aloha = 0.5)
```

```
mpg%>%
  plot_dotviolin(cyl, hwy, dotsize = 0.4, ColPal = "bright")
```

```
mpg%>%
  group_by(model, year) %>%
  ungroup() %>%
  plot_befafter_colors(year, mean_hwy,model)
```

```
library(ggplot2)
library(tidyr)
library(raster)
climate <- getData("worldcilm" , var= "bio", res=2.5)
climate <- crop(climate, extent(-82,-34,-60,15))
```





system learning

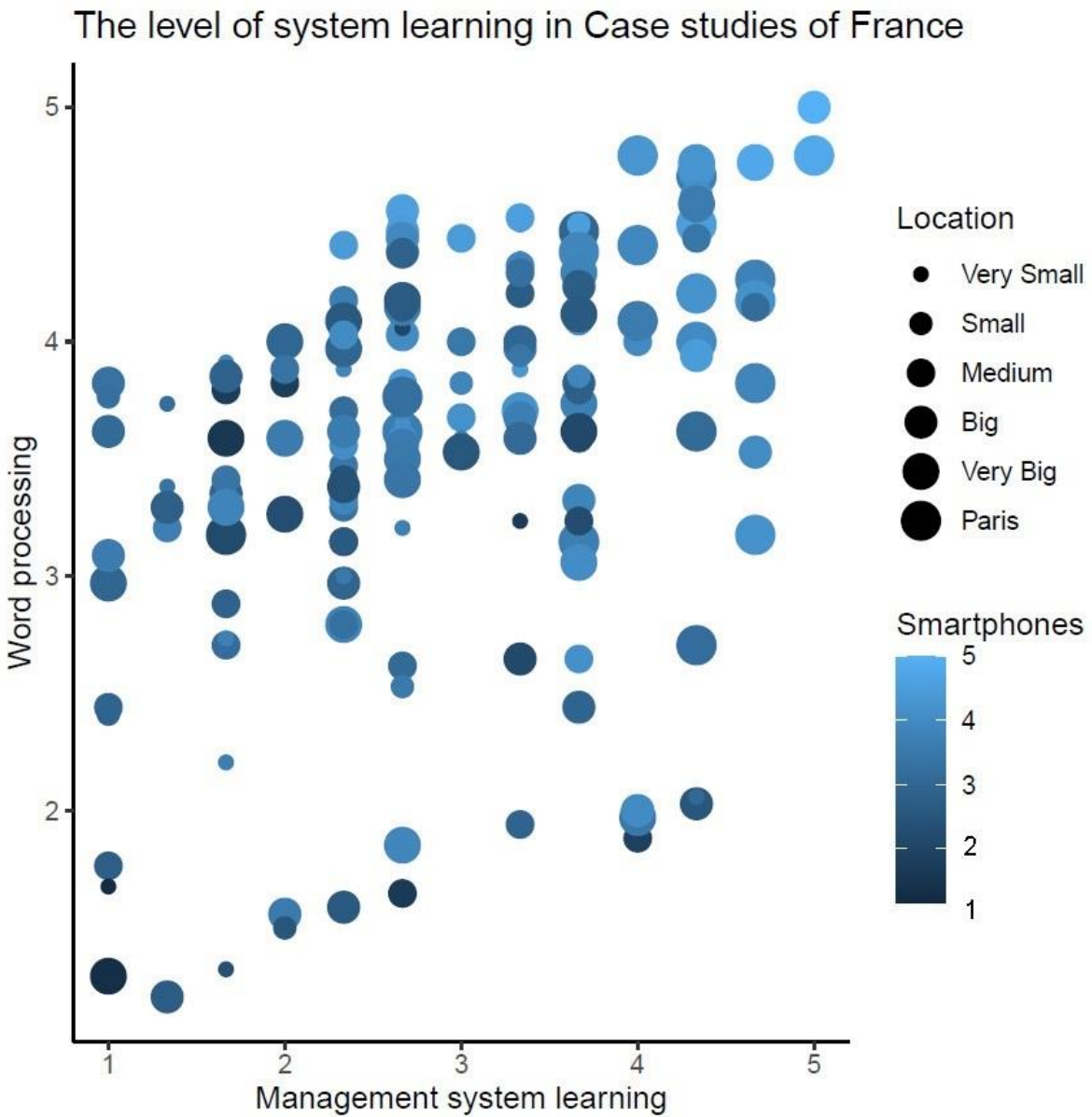
PART4

```
ggplot(PART4, mapping = aes(Management.system.learning, Word.processing1))+
  geom_point(aes(color = Smartphones, size = Location))+
  theme_classic()+
  ggtitle("The level of system learning in Case studies of France")+
  labs(x = "Management system learning", y = "Word processing") +
  scale_size_discrete(range = c(5, 20))+
  theme(legend.text = element_text(size = 16)) +
  theme(legend.title = element_text(size = 20)) +
  theme(axis.text.x = element_text(size = 15, color = "black")) +
  theme(axis.text.y = element_text(size = 15, color = "black")) +
  theme(axis.title = element_text(size = 25)) +
  theme(plot.title = element_text(size = 30, hjust = 0.5)) +
  theme(strip.text.x = element_text(size = 20)) +
  theme(strip.text = element_text(color = "black" ))
```



```
ggsave('point13.PNG', height = 12, width = 15, dpi = 1000)
```

PART4



social media Multiple:

```
library(miscset)
```

```
library(cowplot)
```

```
library(devtools)
```

PART4

```
ggplotGrid(ncol = 2,
```

```
  lapply(c("Facebook", "LinkedIn", "Twitter", "ResearchGate", "Instagram", "Snapchat"),
```

```
    function(col) {
```

```

    ggplot(PART4, aes_string(col)) + geom_bar( fill = "#1DC4CB") + coord_flip())) +
theme_classic()+
theme(panel.grid.major = element_line("n")) +
theme_light()

```

PART4

PART4

```

plot1 <- ggplot(PART4, aes(Facebook))+
  geom_bar(fill = "#1DC4CB") +
coord_flip()+
labs(y = NULL)+
theme_classic()+
theme(axis.title = element_text(size = 25)) +
theme(axis.text.y = element_text(size = 18, color = "black")) +
theme(plot.title = element_text(size = 30, hjust = 0.5)) +
theme(strip.text.x = element_text(size = 30)) +
theme(strip.text = element_text(color = "black" ))

```

PART4

PART4

```

plot2 <-ggplot(PART4, aes(LinkedIn))+
  geom_bar(fill = "#3AF9F9") +
coord_flip()+
labs(y = NULL)+
theme_classic()+
theme(axis.title = element_text(size = 25)) +
theme(axis.text.y = element_text(size = 18, color = "black")) +
theme(plot.title = element_text(size = 30, hjust = 0.5)) +
theme(strip.text.x = element_text(size = 30)) +
theme(strip.text = element_text(color = "black" ))

```

PART4

PART4

```
plot3 <-ggplot(PART4, aes(Twitter))+  
  geom_bar(fill = "#96F9F9") +  
  coord_flip()+  
  labs(y = NULL)+  
  theme_classic()+  
  theme(axis.title = element_text(size = 25)) +  
  theme(axis.text.y = element_text(size = 18, color = "black")) +  
  theme(plot.title = element_text(size = 30, hjust = 0.5)) +  
  theme(strip.text.x = element_text(size = 30)) +  
  theme(strip.text = element_text(color = "black" ))
```

PART4

PART4

```
plot4 <- ggplot(PART4, aes(ResearchGate))+  
  geom_bar(fill = "#1D29CB") +  
  coord_flip()+  
  labs(y = NULL)+  
  theme_classic()+  
  theme(axis.title = element_text(size = 25)) +  
  theme(axis.text.y = element_text(size = 18, color = "black")) +  
  theme(plot.title = element_text(size = 30, hjust = 0.5)) +  
  theme(strip.text.x = element_text(size = 30)) +  
  theme(strip.text = element_text(color = "black" ))
```

PART4

PART4

```
plot5 <-ggplot(PART4, aes(Instagram))+  
  geom_bar(fill = "#5164D7") +  
  coord_flip()+
```

```

labs(y = NULL)+
theme_classic()+
theme(axis.title = element_text(size = 25)) +
theme(axis.text.y = element_text(size = 18, color = "black")) +
theme(plot.title = element_text(size = 30, hjust = 0.5)) +
theme(strip.text.x = element_text(size = 30)) +
theme(strip.text = element_text(color = "black" ))

```

PART4

PART4

```

plot6 <-ggplot(PART4, aes(Snapchat))+
  geom_bar(fill = "#798BF7") +
  coord_flip()+
  labs(y = NULL)+
  theme_classic()+
  theme(axis.title = element_text(size = 25)) +
  theme(axis.text.y = element_text(size = 18, color = "black")) +
  theme(plot.title = element_text(size = 30, hjust = 0.5)) +
  theme(strip.text.x = element_text(size = 30)) +
  theme(strip.text = element_text(color = "black" ))

```

PART4

```

scale_x_continuous(limits = c(1,5))+
coord_cartesian(xlim = c(1,6))+
ggsave('point.m.PNG', height = 15, width = 25, dpi = 400)

```

```

library(patchwork)
plot1 + plot2 + plot3 + plot4 + plot5 + plot6
ggsave('M.SOCIAL.1.PNG', height = 12, width = 15, dpi = 1000)

```

PART4\$Facebook = haven::as_factor(PART4\$Facebook)

PART4\$LinkedIn = haven::as_factor(PART4\$LinkedIn)

PART4\$Twitter = haven::as_factor(PART4\$Twitter)

PART4\$ResearchGate = haven::as_factor(PART4\$ResearchGate)

PART4\$Instagram = haven::as_factor(PART4\$Instagram)

PART4\$Snapchat = haven::as_factor(PART4\$Snapchat)

