# R Ladies
# study group sharing

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# WHO AM I

2 years R learning experiences

Dog person, badminton lover

Currently working in Nielsen, Data Process team

https://www.linkedin.com/in/chingrukuo/

# ggplot2 ft. Study Group

## Bakery transaction data

Date/Time/Transaction/Item

https://github.com/lulukuo530/Bakery-Transcation
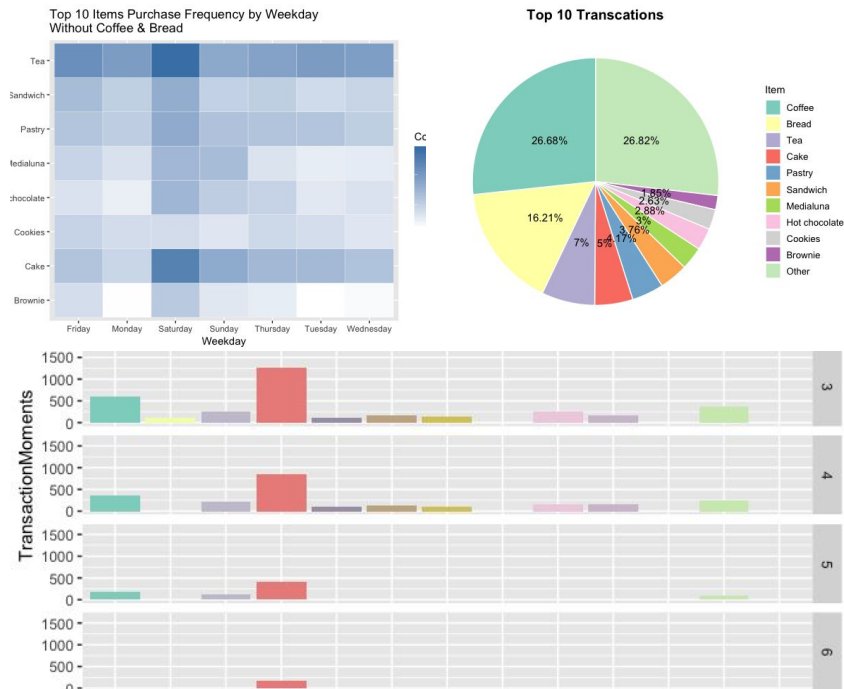
01  |  Time series plot

02  |  Bar chart

03  |  Facet grid

04  |  Box plot

05  |  Pie chart

06  |  Heatmap

# GGPLOT2 ft. Study Group

## Legend position adjust

guides(fill = guide_legend(reverse = TRUE))



Sales Information of Top 10 Items With/Without Coffee
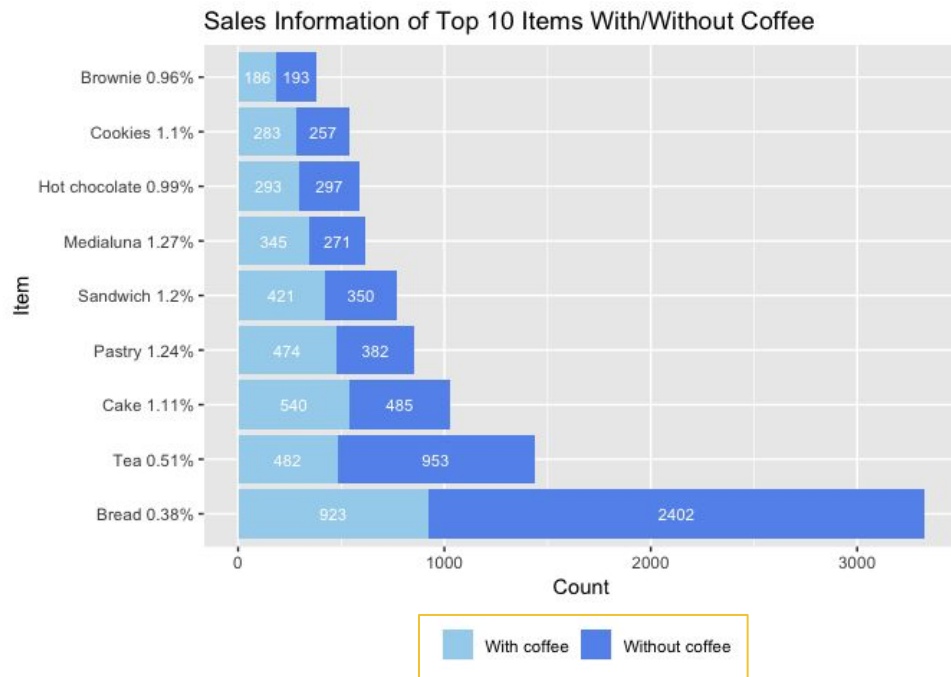
| Item | Coffee | Count |
|---|---|---|
| 1 | Bread | with | 923 |
| 2 | Bread | without | 2402 |
| 3 | Brownie | with | 186 |
| 4 | Brownie | without | 193 |
| 5 | Cake | with | 540 |
| 6 | Cake | without | 485 |
| 7 | Cookies | with | 283 |
| 8 | Cookies | without | 257 |
| 9 | Hot chocolate | with | 293 |
| 10 | Hot chocolate | without | 297 |
| 11 | Medialuna | with | 345 |
| 12 | Medialuna | without | 271 |
| 13 | Pastry | with | 474 |
| 14 | Pastry | without | 382 |
| 15 | Sandwich | with | 421 |
| 16 | Sandwich | without | 350 |
| 17 | Tea | with | 482 |
| 18 | Tea | without | 953 |

# GGPLOT2 ft. Study Group

## Colour pallette

> display.brewer.all()
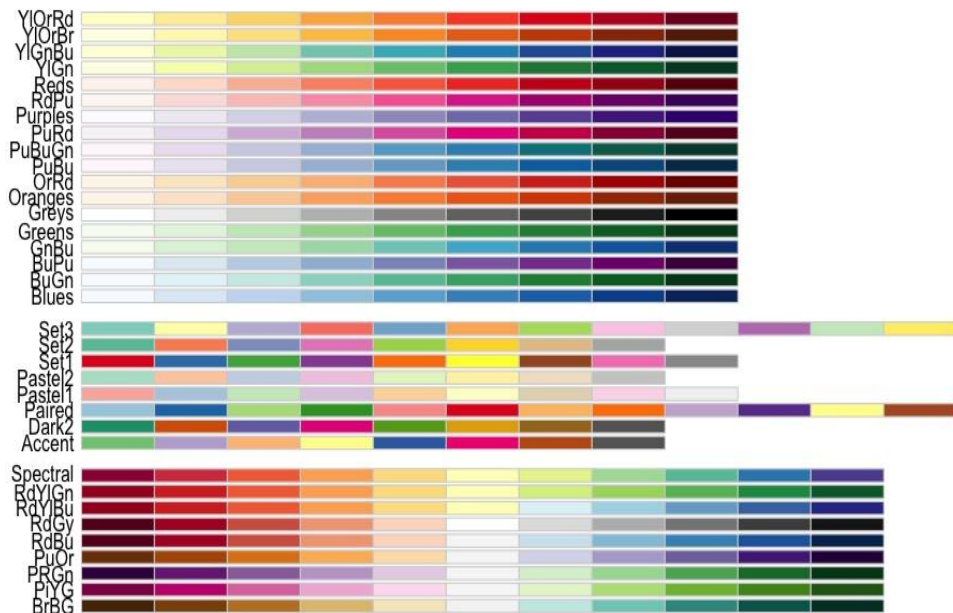
➔ **If the colour is enough for the categories:**

+ scale_fill_brewer(type="seq", palette = "Set3")
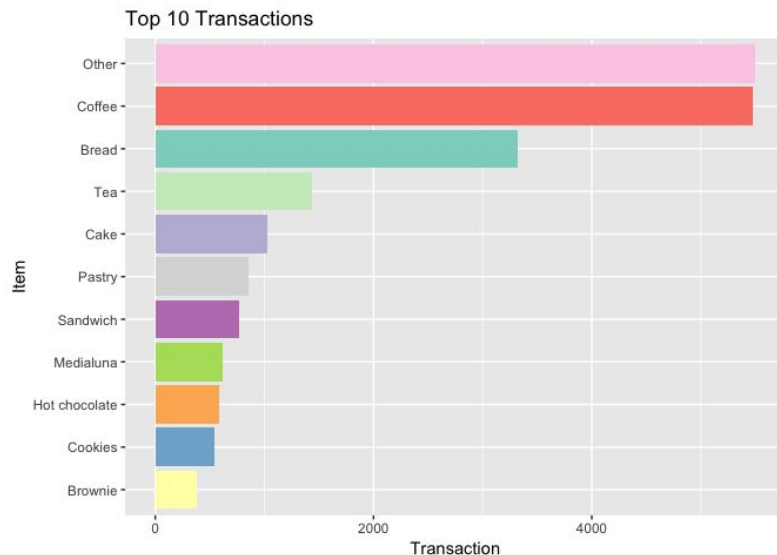
# GGPLOT2 ft. Study Group

## Colour pallette

➔ **If the colour is not enough for the categories:**

#set how many colours needed
> colourCount = length(unique(data_hr$Hour))
#choose which palette to use,
#and how many colour in the palette is used
> getPalette = colorRampPalette(brewer.pal(12, "Set3"))

> ggplot ... +
+ scale_fill_manual(values = getPalette(colourCount))



Transactions per hour (Unique Transaction ID)
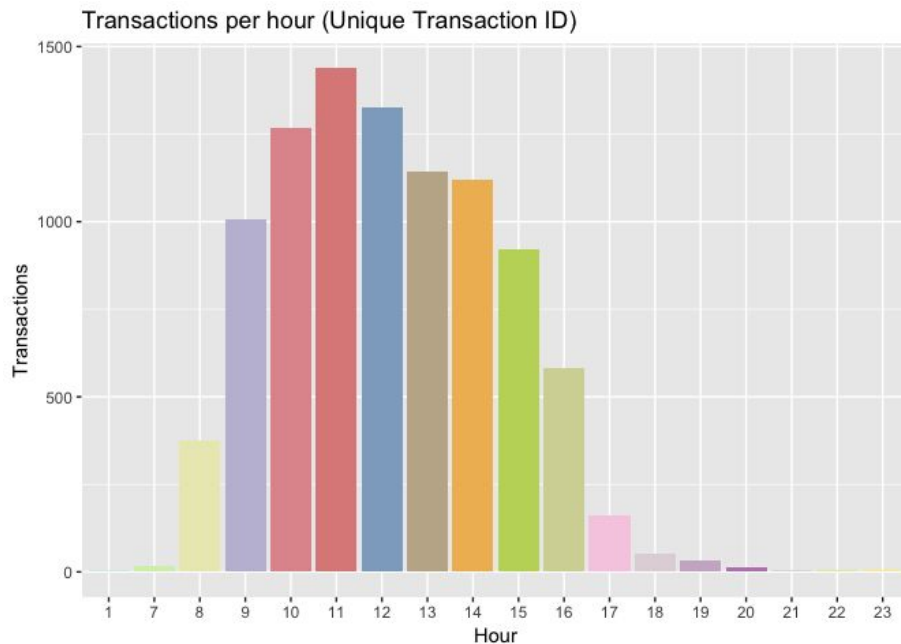
# ggplot2 ft. Study Group

## theme

- theme_void()
- theme_test()
- theme_minimal()

➔ https://ggplot2.tidyverse.org/reference/ggtheme.html



```
theme_bw(base_size = 11, base_family = "",
    base_line_size = base_size/22, base_rect_size =
    base_size/22)
```

These are complete themes which control all non-data display. Use `theme()` if you just need to tweak the display of an existing theme.

Press F1 for additional help

```
> theme_
```

| ◆ theme_bw | {ggplot2} |
| ◆ theme_classic | {ggplot2} |
| ◆ theme_dark | {ggplot2} |
| ◆ theme_get | {ggplot2} |
| ◆ theme_gray | {ggplot2} |
| ◆ theme_grey | {ggplot2} |

## Show Chinese character

- par(family="STKaiti")  #for none plot
- + theme(text=element_text(family="STKaiti", size=15)
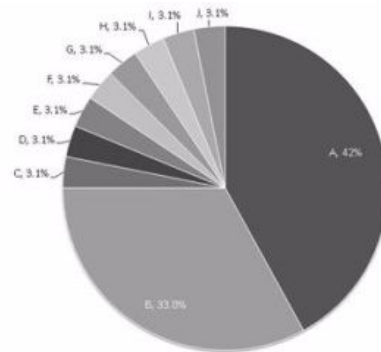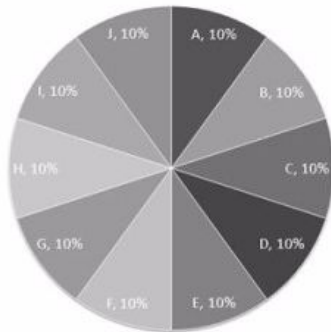
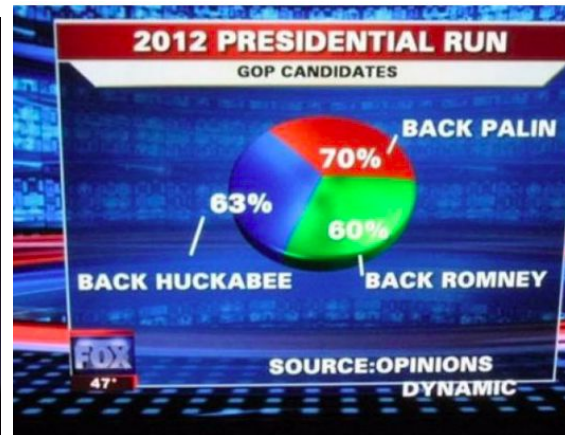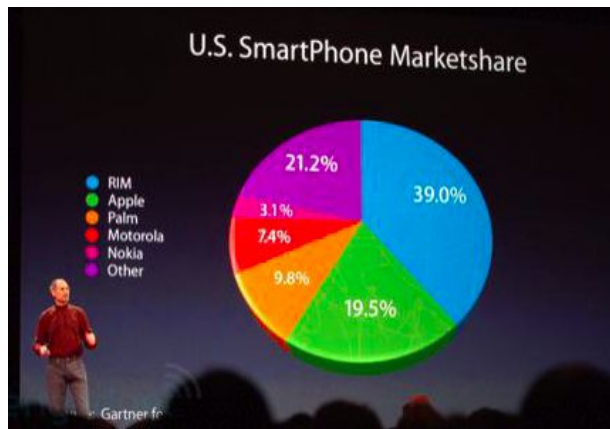# GGPLOT2 INTERACTIVE INTERFACE

ESQUISSE

[https://github.com/dreamRs/esquisse](https://github.com/dreamRs/esquisse)

library(esquisse)

esquisse::esquisser()

# Graph performances in business

Pie Chart

✔ Old time favourite

✔ Straightforward

✔ A Total 100 percent

✔ Specific sample size

✔ Avoid too many slides

✘ Unable to tell the differences

✘ Never use 3D to confuse audiences



Image source: https://vide.tw/1679

# Graph performances in business

**02  |  Bar Chart**

✔ For categorical variables

✔ Easy to identify comparisons

✔ Instantly understand growth performance

✔ Axis sort by numerical/alphabetical order

✔ User percentage rather than actual numbers

✘ Never use double y-axis

✘ Never use 3D to confuse audiences



Image source: https://www.managertoday.com.tw/articles/view/54201

# Graph performances in business

**03 |** Other Requirements

✔ Animated

✔ Informative

✔ Interactive

✘ Did not clarify x and y axis

✘ Never use 3D plots

✘ Don't contain more than three information in one plot



**Frequency and Total Usage by Applications over 13 day period between 17/07 and 29/07**

UU-JLFU-EEIH-CXIT-YTWR-ID
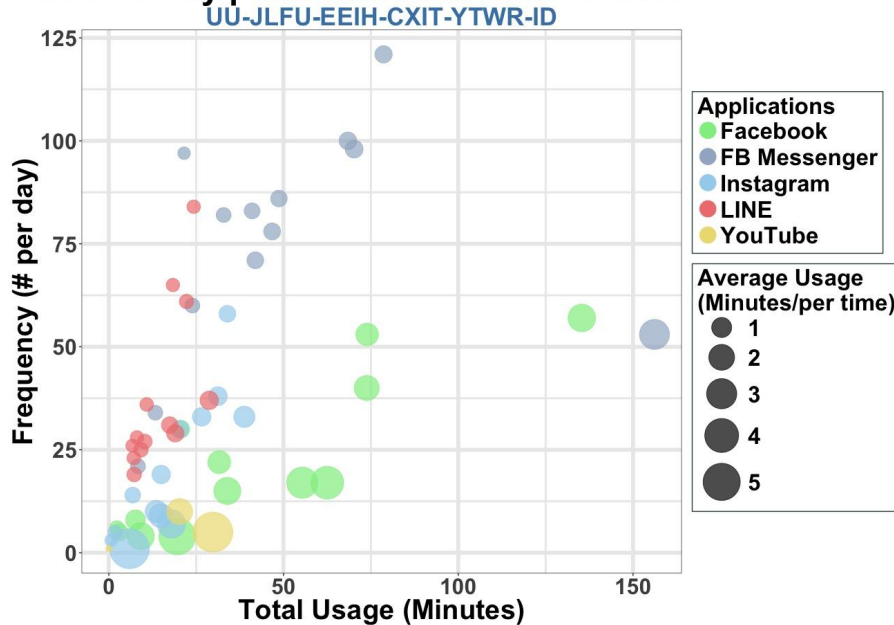
# Recommend websites

**1**   **Top 50 ggplot2 Visualizations - The Master List**

http://r-statistics.co/Top50-Ggplot2-Visualizations-MasterList-R-Code.html#top

**2**   **Beautiful plotting in R: A ggplot2 cheatsheet**

http://zevross.com/blog/2014/08/04/beautiful-plotting-in-r-a-ggplot2-cheatsheet-3/#TOC

**3**   **BBC Visual and Data Journalism cookbook for R graphics**

https://bbc.github.io/rcookbook/

**4**   **Python Seaborn Plots in R using reticulate**

https://towardsdatascience.com/python-seaborn-plots-in-r-using-reticulate-fb59cebf61a7

**5**   **Colour Guides**

https://www.rstudio.com/wp-content/uploads/2015/03/ggplot2-cheatsheet.pdf

https://www.nceas.ucsb.edu/~frazier/RSpatialGuides/colorPaletteCheatsheet.pdf

http://www.stat.columbia.edu/~tzheng/files/Rcolor.pdf

# Thank you.

Q&A