

# Homework - Week 4: Plotting Data

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```
library(dplyr)

##
## Attaching package: 'dplyr'
## The following objects are masked from 'package:stats':
##
##   filter, lag
## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union

library(tidyr)
library(ggplot2)
library(RColorBrewer)
options(scipen = 999)

library(readr)
io_income_rs <- read_csv("C:/Users/Kartik Sharma/Desktop/Semester 3/Fundamentals of R/Week 4/Material f

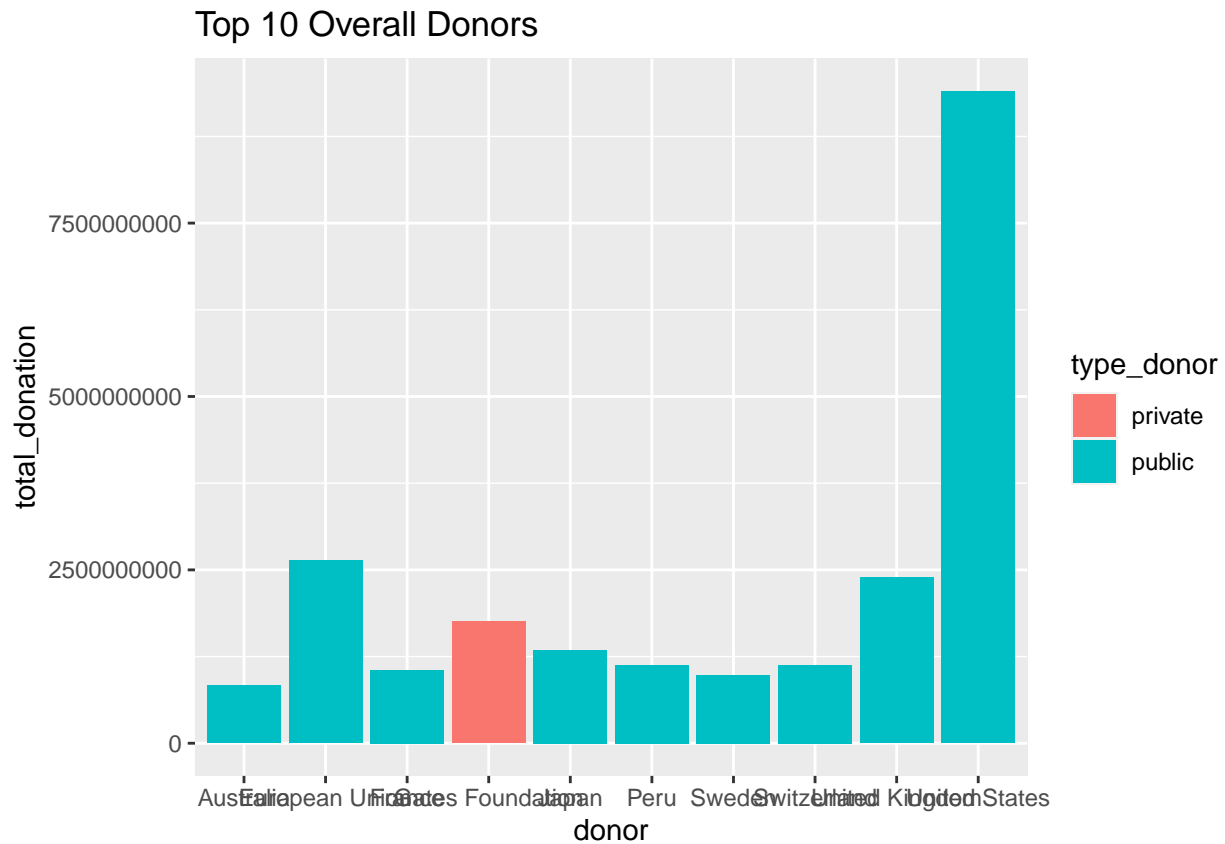
## Rows: 4500 Columns: 5

## -- Column specification -----
## Delimiter: ","
## chr (3): donor, type_donor, issue_area
## dbl (2): year, amount_nominal
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

## Question 1

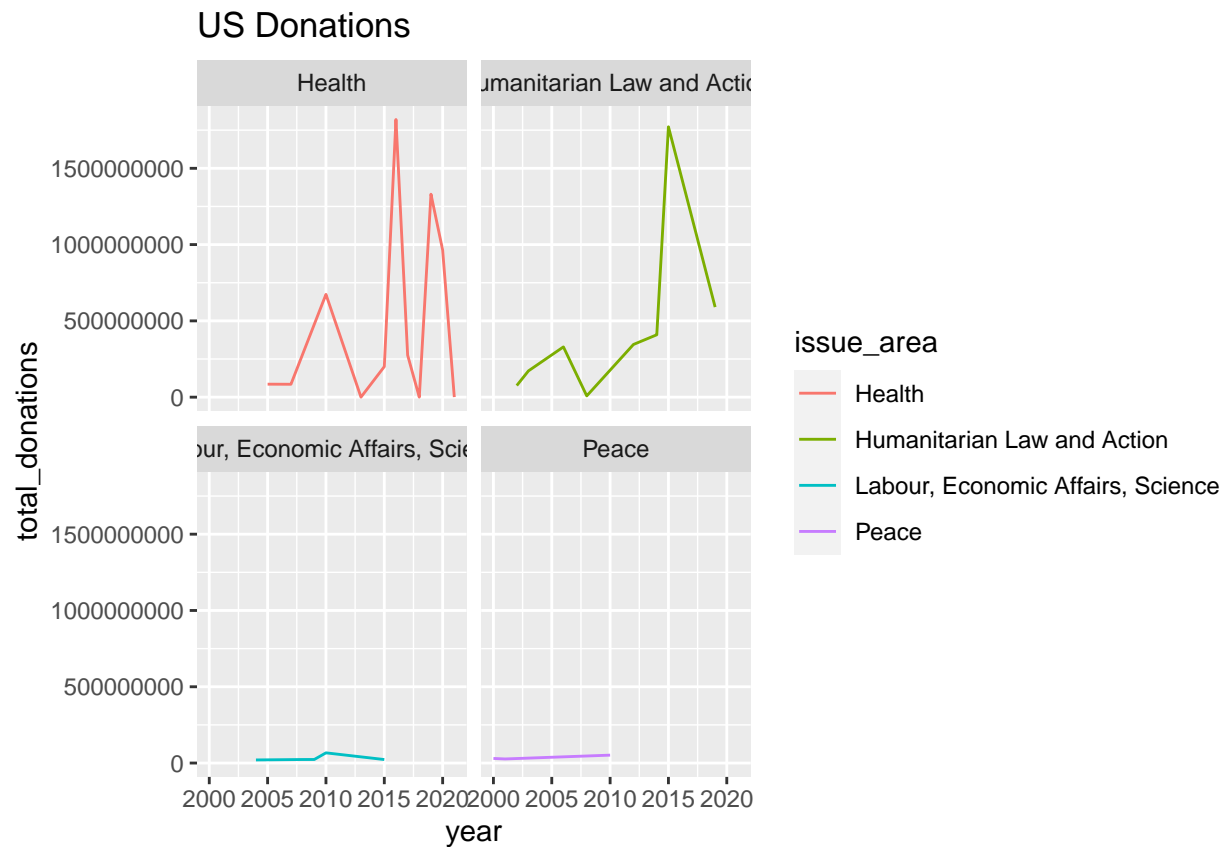
```
io_income_rs %>%
  drop_na(donor)%>%
  group_by(donor, type_donor) %>%
  summarise(total_donation = sum(amount_nominal, na.rm = TRUE)) %>%
  arrange(-total_donation) %>%
  ungroup() %>%
  slice(1:10) %>%
  ggplot(mapping = aes(x = donor, y = total_donation, fill = type_donor))+
  labs(title = "Top 10 Overall Donors")+
  geom_col()
```

## `summarise()` has grouped output by 'donor'. You can override using the  
## `.groups` argument.



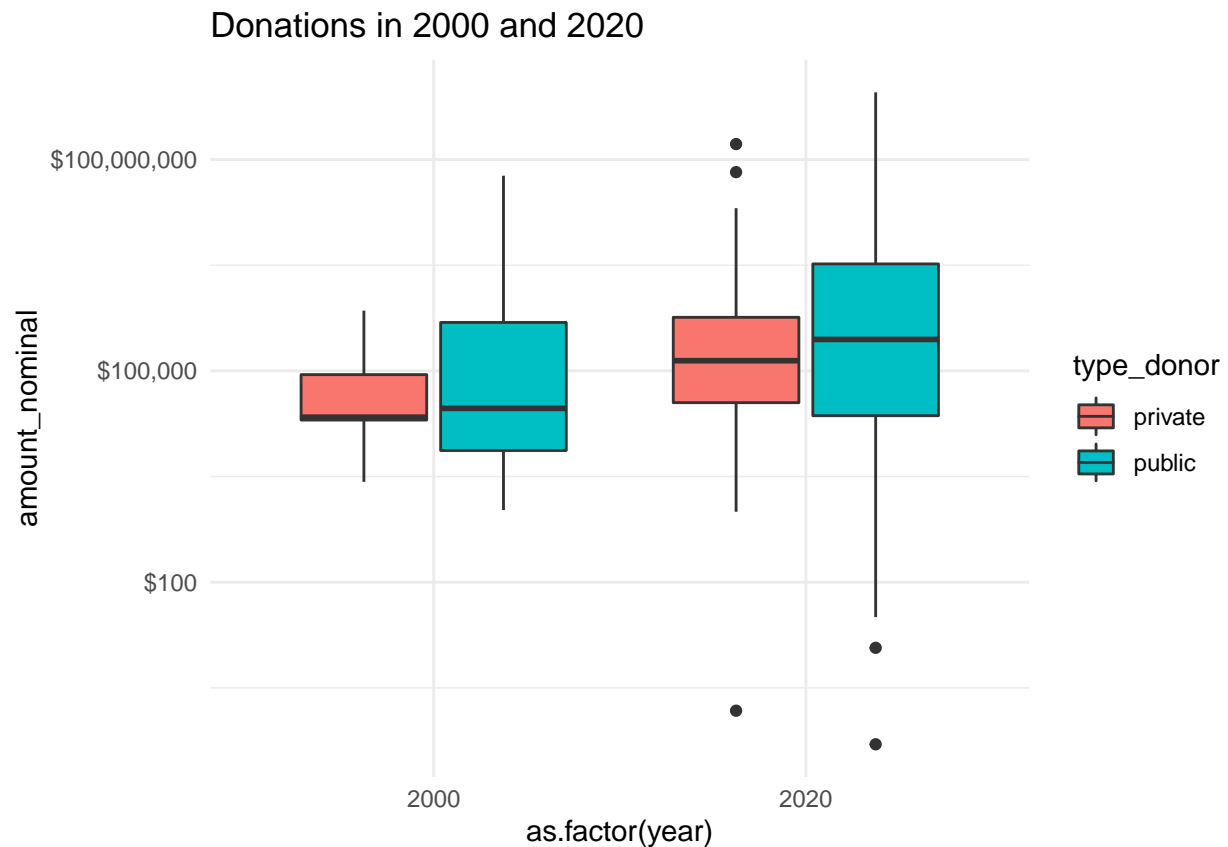
## Question 2

```
io_income_rs %>%
  filter(donor == "United States") %>%
  group_by(year, issue_area) %>%
  summarise(total_donations = sum(amount_nominal, na.rm = TRUE)) %>%
  ggplot(mapping = aes(x=year, y=total_donations, color = issue_area))+
  labs(title = "US Donations")+
  geom_line()+
  facet_wrap(~issue_area)
```



### Question 3

```
io_income_rs %>%
  filter(year == 2000 | year == 2020) %>%
  drop_na() %>%
  ggplot(mapping = aes(y=amount_nominal, x=as.factor(year), fill= type_donor))+
  labs(title = "Donations in 2000 and 2020")+
  geom_boxplot()+
  scale_y_log10(labels=scales::dollar)+
  theme_minimal()
```



## Question 4

```
io_income_rs %>%
  drop_na() %>%
  ggplot(mapping = aes(x = year, y = amount_nominal)) +
  labs(title = "Donations in Issue Areas by Year per Donor") +
  geom_point(aes(shape = type_donor, alpha = 0.5)) +
  facet_wrap(~issue_area, scales = "free_y") +
  geom_smooth(method = "lm", color = "red") +
  scale_y_log10()
```

```
## `geom_smooth()` using formula 'y ~ x'
```

Donations in Issue Areas by Year per Donor

