Utfordring-6.R

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```
library(rjstat)
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.2 --
## v ggplot2 3.3.6      v purrr   0.3.4
## v tibble  3.1.6      v dplyr   1.0.10
## v tidyr   1.1.4      v stringr 1.4.0
## v readr   2.1.2      v forcats 0.5.1
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::id()     masks rjstat::id()
## x dplyr::lag()    masks stats::lag()
```

```
library(PxWebApiData)
library(ggplot2)
library(dplyr)
library(ggrepel)
library(plyr)
```

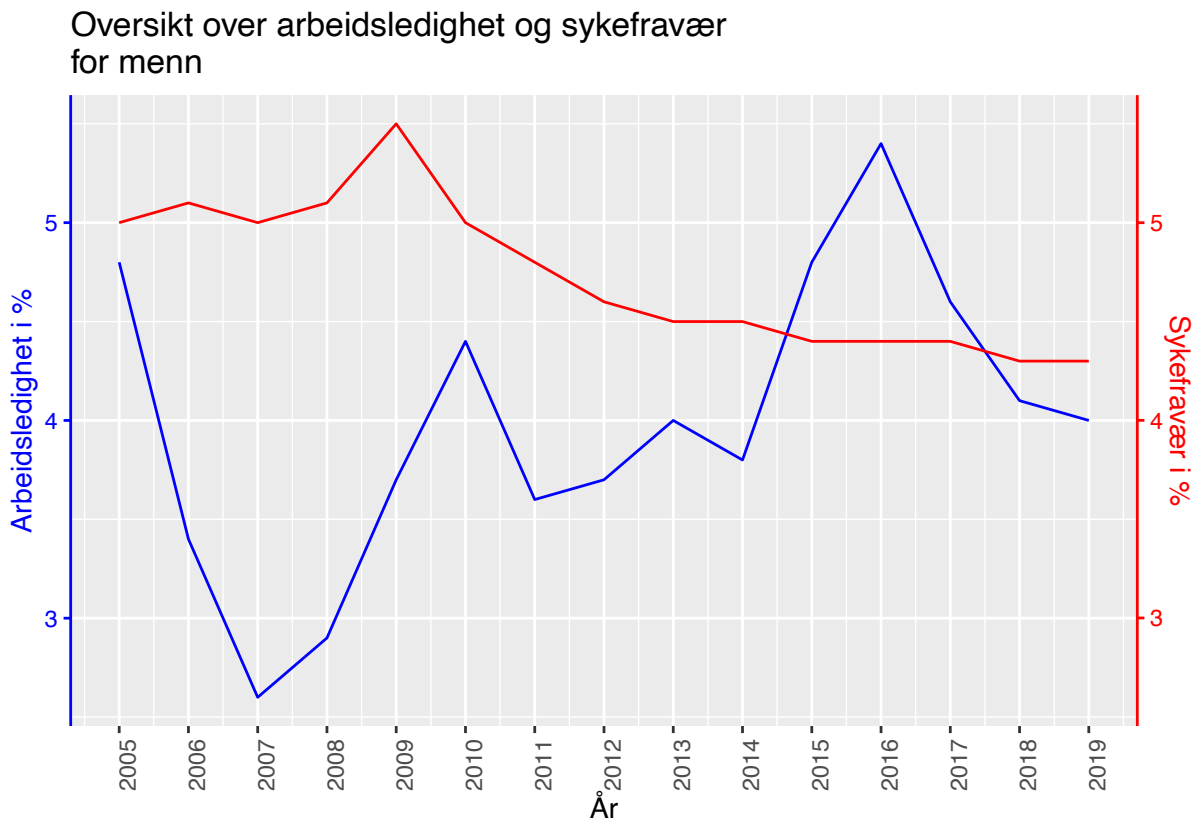
```
## ------------------------------------------------------------------------------
## You have loaded plyr after dplyr - this is likely to cause problems.
## If you need functions from both plyr and dplyr, please load plyr first, then dplyr:
## library(plyr); library(dplyr)
## ------------------------------------------------------------------------------
##
## Attaching package: 'plyr'
##
## The following objects are masked from 'package:dplyr':
##
##     arrange, count, desc, failwith, id, mutate, rename, summarise,
##     summarize
##
## The following object is masked from 'package:purrr':
##
##     compact
##
## The following object is masked from 'package:rjstat':
##
##     id
```

```
library(httr)
library(patchwork)


url1 <- "https://data.ssb.no/api/v0/no/table/12441/"


data1 <- '{"query": [{"code": "Kjonn",
"selection": {"filter": "item","values": ["1","2"]}},{"code": "Tid",
"selection": {"filter": "item","values": ["2005","2006","2007",
"2008","2009","2010","2011","2012","2013","2014","2015",
"2016","2017","2018","2019"]}}],"response": {"format": "json-stat2"}}
'

data1 <- POST(url1, body = data1, encode = "json", verbose())
```

```
data1 <- fromJSONstat(content(data1, "text"))


url2 <- "https://data.ssb.no/api/v0/no/table/05111/"

data2 <- '{
"query": [{"code": "ArbStyrkStatus","selection": {"filter": "item",
"values": ["2"]}},{"code": "Kjonn","selection": {"filter": "item",
"values": ["1","2"]}},{"code": "Alder","selection": {
"filter": "item","values": ["15-74"]}},{"code": "ContentsCode","selection": {
"filter": "item","values": ["Prosent"]}},{"code": "Tid","selection": {
"filter": "item","values": ["2005","2006","2007","2008","2009",
"2010","2011","2012","2013","2014","2015","2016","2017",
"2018","2019"]}}],"response": {"format": "json-stat2"}}
'
data2 <- POST(url2, body = data2, encode = "json", verbose())
```

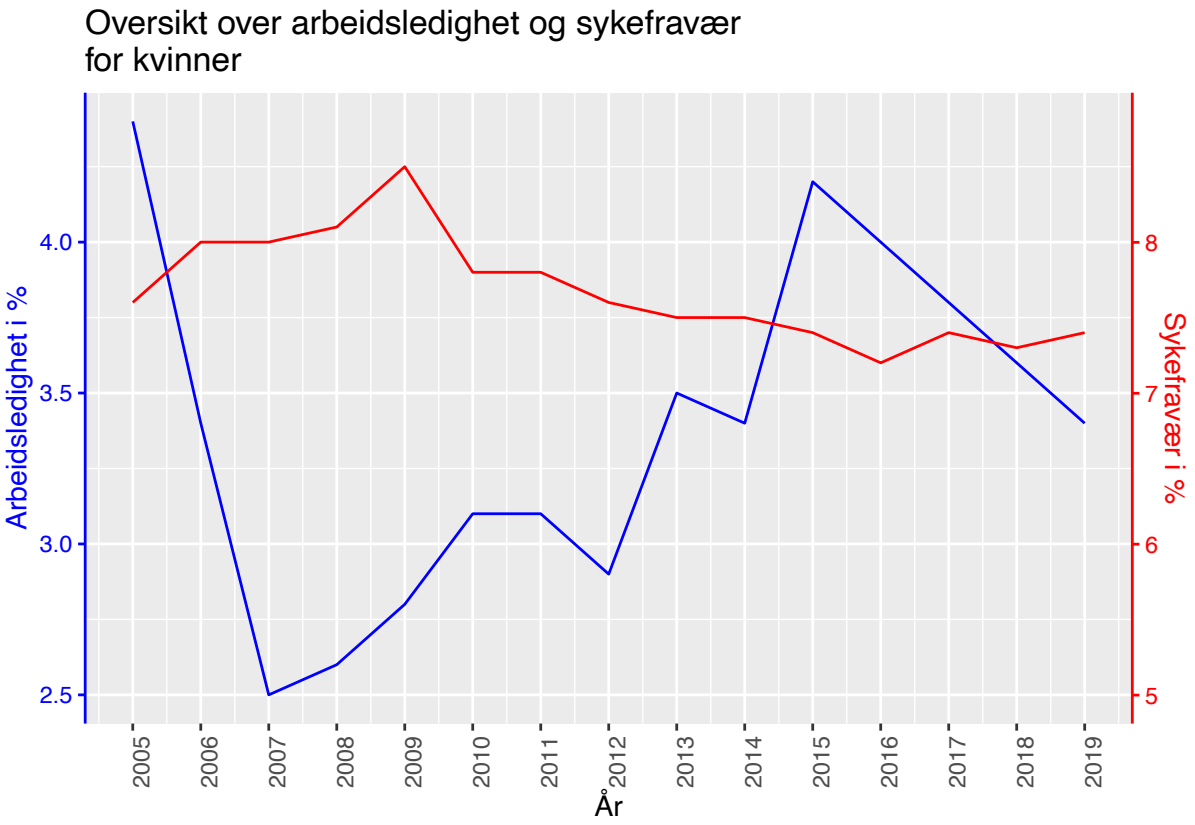
```
data2 <- fromJSONstat(content(data2, "text"))


datasett <- merge(data1,data2, by = c("år", "kjønn"))
data_menn <- datasett %>% filter(kjønn == "Menn")
data_kvinner <- datasett %>% filter(kjønn == "Kvinner")
data_menn$år <- as.numeric(as.character(data_menn$år))
data_kvinner$år <- as.numeric(as.character(data_kvinner$år))

coff <- 1

plott1 <- data_menn %>% ggplot(aes(x=år, y=value.y)) +
  geom_line(color = "blue") +
  geom_line(aes(y = value.x/coff), color = "red") +
  scale_y_continuous("Arbeidsledighet i %", sec.axis = sec_axis(~.*coff, name = "Sykefravær i %")) +
  scale_x_continuous("År", breaks = 2005:2019) +
  theme(axis.line.y.right = element_line(color = "red"),
        axis.ticks.y.right = element_line(color = "red"),
        axis.text.y.right = element_text(color = "red"),
        axis.title.y.right = element_text(color = "red")) +
```

```
  theme(axis.line.y.left = element_line(color = "blue"),
        axis.ticks.y.left = element_line(color = "blue"),
        axis.text.y.left = element_text(color = "blue"),
        axis.title.y.left = element_text(color = "blue")) +
  ggtitle("Oversikt over arbeidsledighet og sykefravær\nfor menn") +
  theme(axis.text.x=element_text(angle=90, hjust=1))

plott1
```

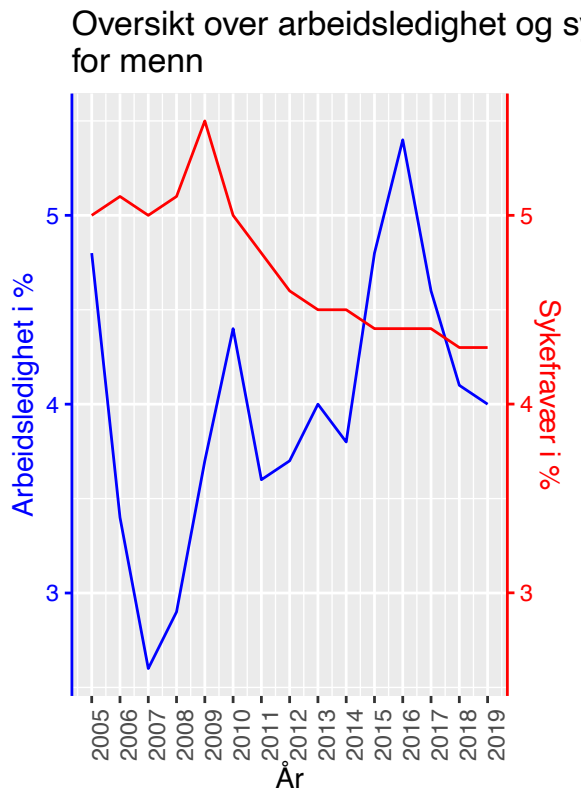


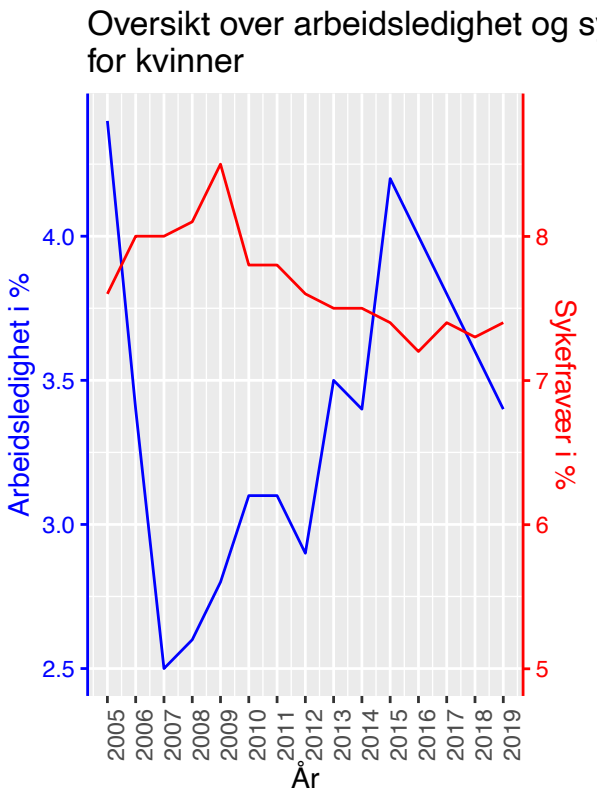

```
coffen <- 2

plott2 <- data_kvinner %>% ggplot(aes(x=år, y=value.y)) +
  geom_line(color = "blue") +
  geom_line(aes(y = value.x/coffen), color = "red") +
  scale_y_continuous("Arbeidsledighet i %", sec.axis = sec_axis(~.*coffen, name = "Sykefravær i %")) +
  scale_x_continuous("År", breaks = 2005:2019) +
  theme(axis.line.y.right = element_line(color = "red"),
        axis.ticks.y.right = element_line(color = "red"),
        axis.text.y.right = element_text(color = "red"),
        axis.title.y.right = element_text(color = "red")) +
  theme(axis.line.y.left = element_line(color = "blue"),
        axis.ticks.y.left = element_line(color = "blue"),
        axis.text.y.left = element_text(color = "blue"),
        axis.title.y.left = element_text(color = "blue")) +
  ggtitle("Oversikt over arbeidsledighet og sykefravær\nfor kvinner") +
```

```
  theme(axis.text.x=element_text(angle=90, hjust=1))

plott2
```




```
plott1 + plott2
```


Oversikt over arbeidsledighet og s
for menn
Arbeidsledighet i %
Sykefravær i %
5
4
3
5
4
3
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
År


Oversikt over arbeidsledighet og sy
for kvinner
Arbeidsledighet i %
Sykefravær i %
4.0
3.5
3.0
2.5
8
7
6
5
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
År