Untitled

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6/26/2020

Downloading the data

```
setwd("C:/Users/HEMANT/Documents/GIT/RepData_PeerAssessment1")
list.files()
```

```
##  [1] "activity.csv"                  "activity.zip"
##  [3] "course5week2"                  "doc"
##  [5] "instructions_fig"              "markdown.Rmd"
##  [7] "PA_1.Rmd"                      "PA_1_files"
##  [9] "PA1_template.html"             "PA1_template.md"
## [11] "PA1_template.Rmd"              "PA1_template_files"
## [13] "plot1"                         "plot1.png"
## [15] "plot2.png"                     "plot3.png"
## [17] "plot4.png"                     "README.md"
## [19] "rep_1"                         "RepData_PeerAssessment1.Rproj"
## [21] "Rplots.pdf"                    "week_2"
```

```
activity <- read.csv("activity.csv")
head(activity)
```

```
##   steps       date interval
## 1    NA 2012-10-01        0
## 2    NA 2012-10-01        5
## 3    NA 2012-10-01       10
## 4    NA 2012-10-01       15
## 5    NA 2012-10-01       20
## 6    NA 2012-10-01       25
```

```
activity_final <- na.omit(activity)
head(activity_final)
```

```
##     steps       date interval
## 289     0 2012-10-02        0
## 290     0 2012-10-02        5
## 291     0 2012-10-02       10
## 292     0 2012-10-02       15
## 293     0 2012-10-02       20
## 294     0 2012-10-02       25
```

Mean steps taken per day

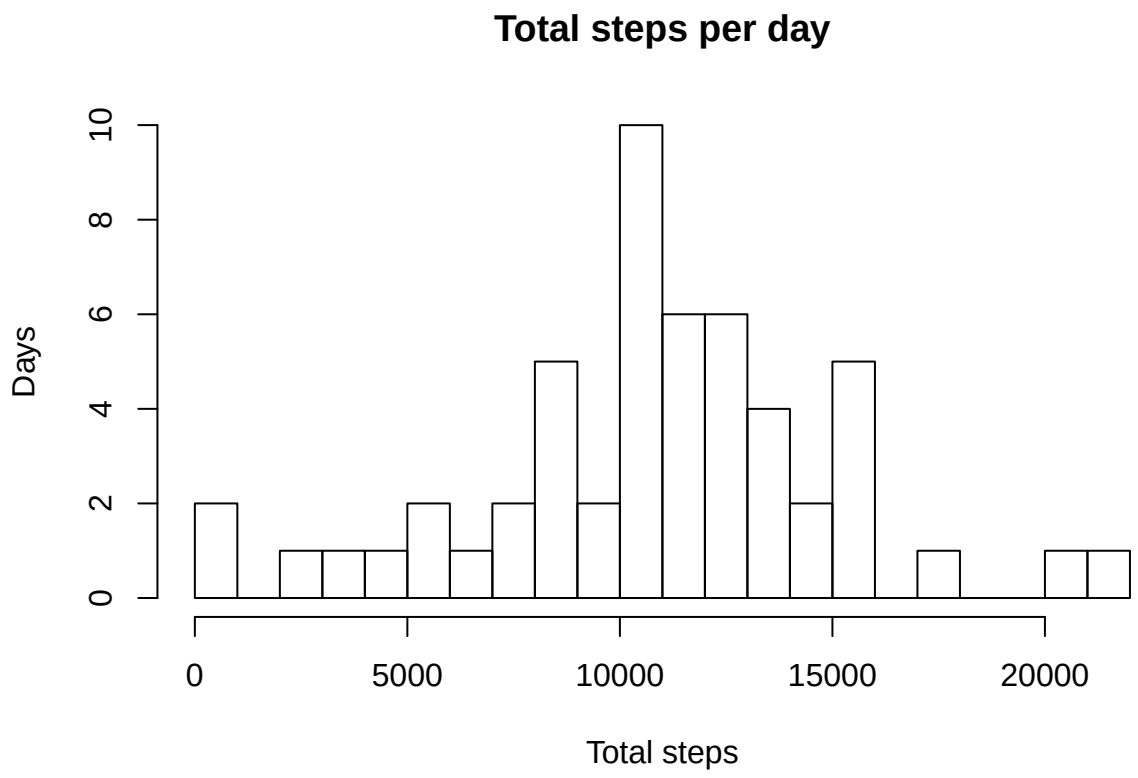
```
library(magrittr)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

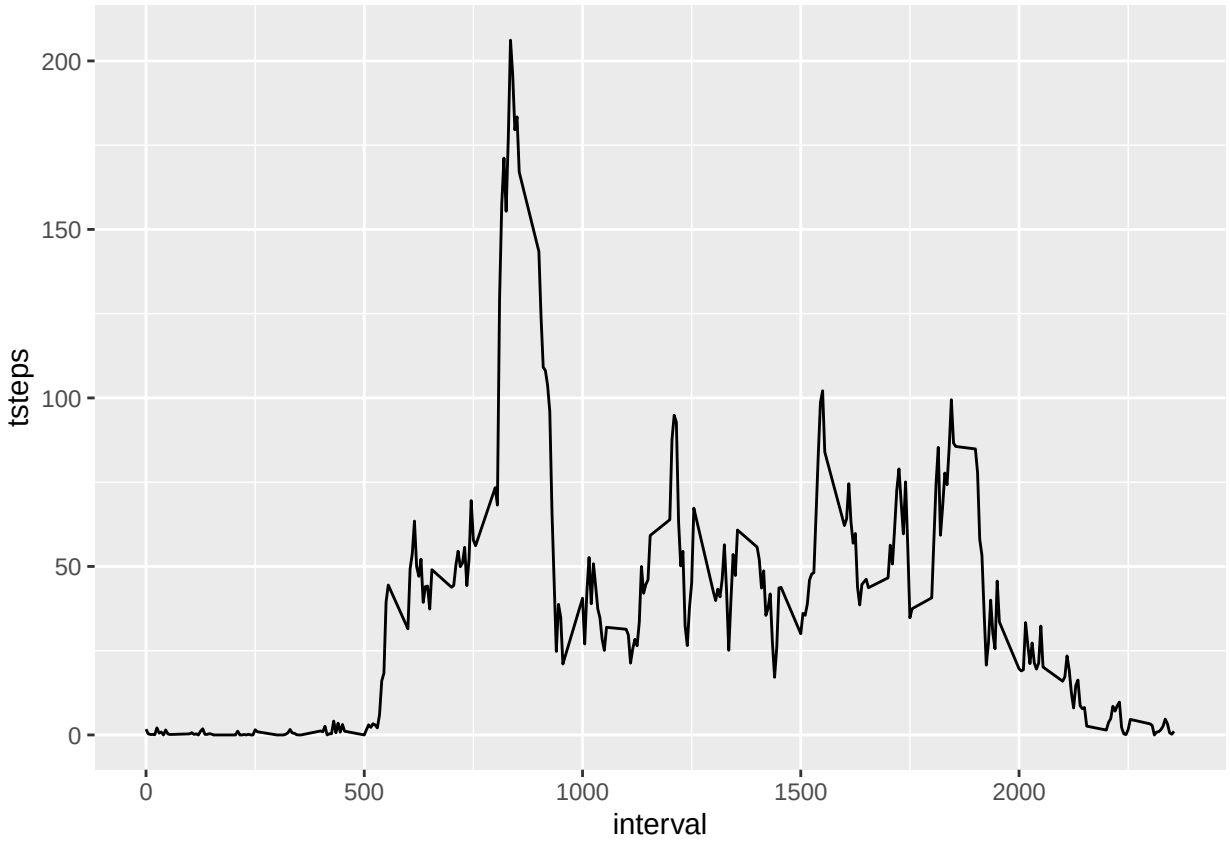
```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(ggplot2)
activity_date <- activity_final %>% group_by(date) %>% summarise(totalsteps = sum(steps))
mean_steps <- mean(activity_date$totalsteps)
median_steps <- median(activity_date$totalsteps)
hist(activity_date$totalsteps,xlab = "Total steps",ylab = "Days",main = "Total steps per day",breaks = 1
```



Daily activity

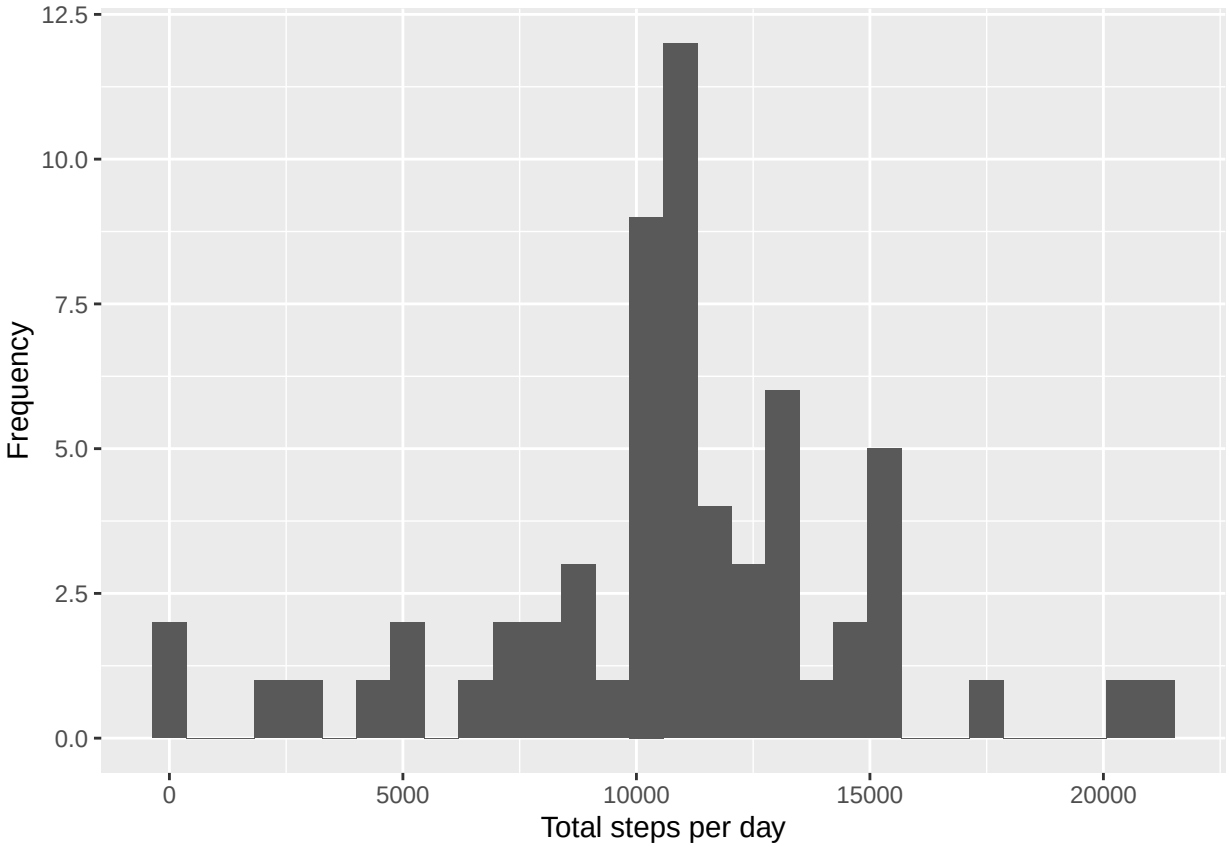
```
library(ggplot2)
library(dplyr)
databyinterval <-activity %>% select(interval, steps) %>% na.omit() %>% group_by(interval) %>% summariz
ggplot(databyinterval,aes(x=interval,y=tsteps))+geom_line()
```



Frequency of steps

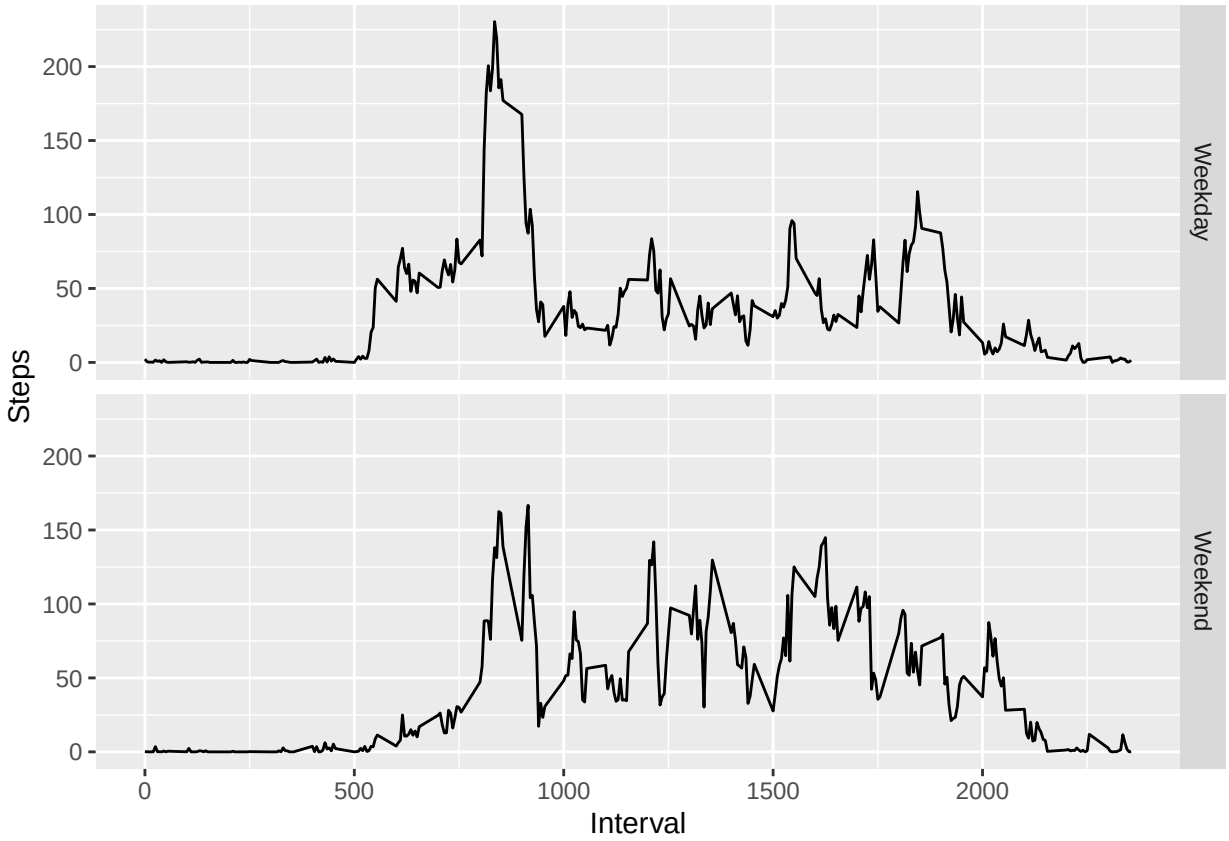
```
library(dplyr)
library(ggplot2)
activity_NA <- activity[which(is.na(activity$steps)),]
activity_NA$steps <- ifelse(activity_NA$interval == databyinterval$interval , databyinterval$tsteps)
activity_noNA <- rbind( activity_NA , activity_final)
View(activity_noNA)
Daily_steps <- activity_noNA %>% group_by(activity_noNA$date) %>% summarise(daily_steps = sum(steps))
qplot(daily_steps , data = Daily_steps , xlab = "Total steps per day" , ylab = "Frequency" )
```

```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```



Difference in activity patterns between weekdays and weekends

```
activity_noNA$date <- as.Date(activity_noNA$date)
weekday <- weekdays(activity_noNA$date)
activity_noNA$weekday <- weekdays(activity_noNA$date)
View(activity_noNA)
activity_noNA$weekend <- ifelse(activity_noNA$weekday == "Saturday" | activity_noNA$weekday == "Sunday"
View(activity_noNA)
library(ggplot2)
y <- aggregate(activity_noNA$steps , by = list(activity_noNA$weekend , activity_noNA$interval) , na.omi
names(y) <- c("Weekend" , "Interval" , "Steps")
ggplot(data = y , aes(x = Interval , y = Steps)) + geom_line() + facet_grid(Weekend ~ .)
```


Steps
200
150
100
50
0
Weekday
Weekend
0
500
1000
1500
2000
Interval