Reproducible Research 1

Data

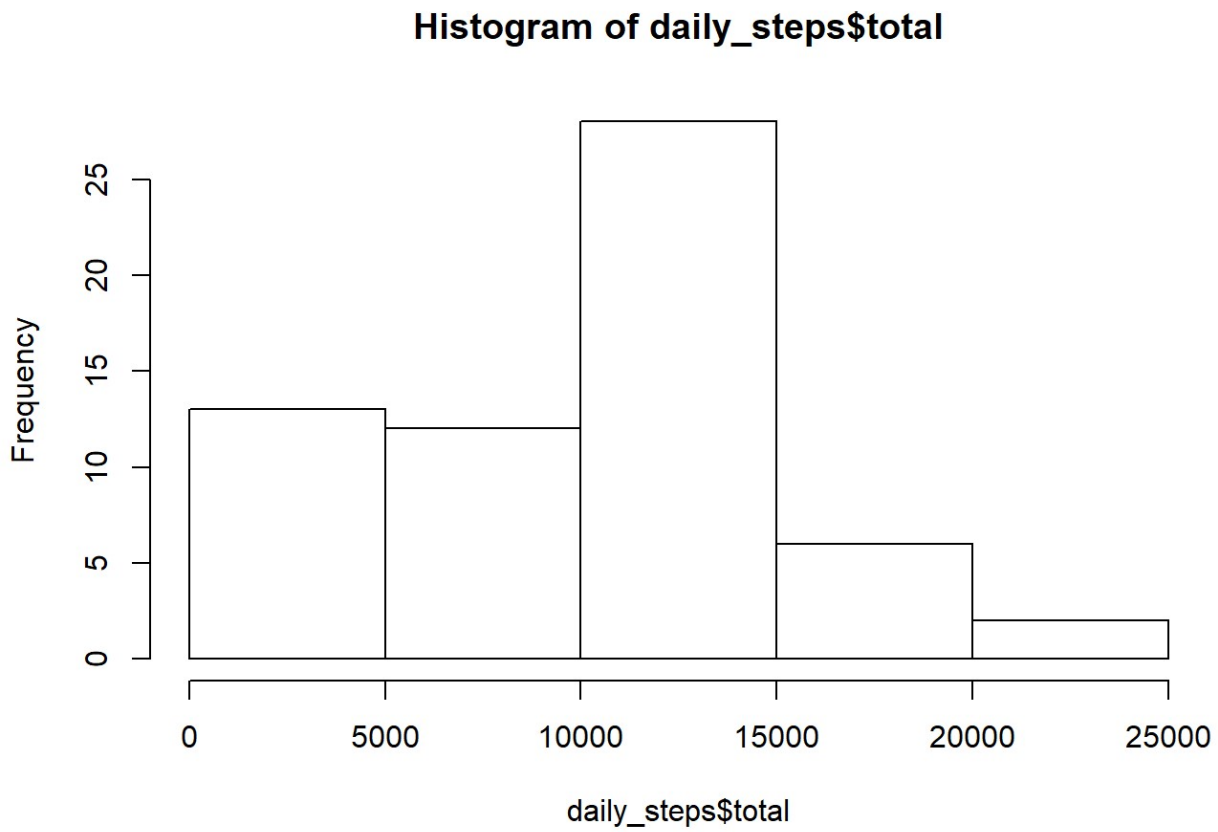
```
data <- read.csv('C:\\Users\\U57TTO\\Downloads\\repdata_data_activity\\activit
y.csv')
data$date <- as.Date(data$date)

daily_steps <- data %>% group_by(date) %>% summarize(total = sum(steps, na.rm
= TRUE)
                              ,mean = mean(steps, na.rm = TRUE)
                              ,median = median(steps,na.rm=TRUE))
```

```
## `summarise()` ungrouping output (override with `.groups` argument)
```

Steps Histogram

```
hist(daily_steps$total)
```



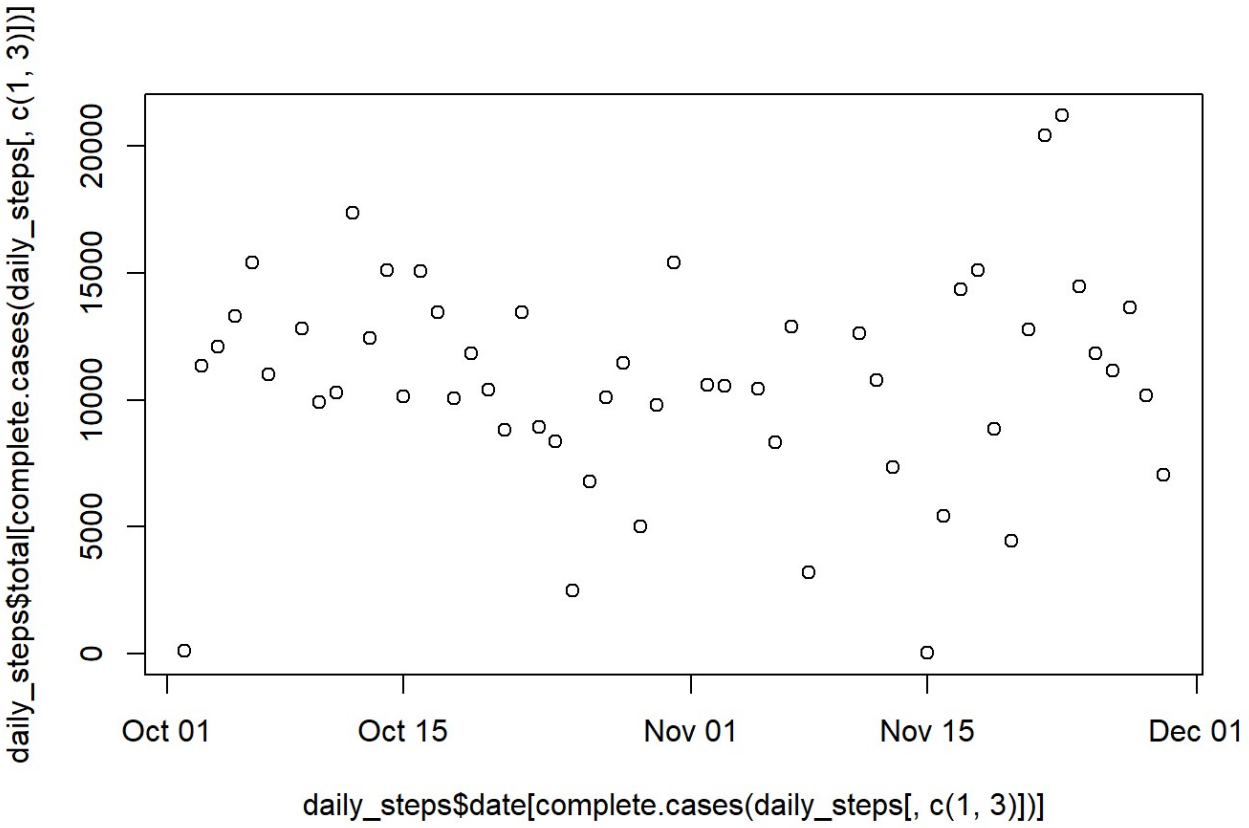
Steps Mean & Median

```
print(daily_steps)
```

```
## # A tibble: 61 x 4
##    date       total    mean median
##    <date>     <int>   <dbl>  <dbl>
##  1 2012-10-01     0 NaN         NA
##  2 2012-10-02   126   0.438      0
##  3 2012-10-03 11352  39.4        0
##  4 2012-10-04 12116  42.1        0
##  5 2012-10-05 13294  46.2        0
##  6 2012-10-06 15420  53.5        0
##  7 2012-10-07 11015  38.2        0
##  8 2012-10-08     0 NaN         NA
##  9 2012-10-09 12811  44.5        0
## 10 2012-10-10  9900  34.4        0
## # ... with 51 more rows
```

Steps Plot

```
plot(x=daily_steps$date[complete.cases(daily_steps[,c(1,3)])], y = daily_steps
$total[complete.cases(daily_steps[,c(1,3)])])
```




```
int5_steps <- data %>% group_by(interval) %>% summarize(total = sum(steps, na.r
m = TRUE))
```

```
## `summarise()` ungrouping output (override with `.groups` argument)
```

```
int5_steps$interval[int5_steps$total==max(int5_steps$total)]
```

```
## [1] 835
```

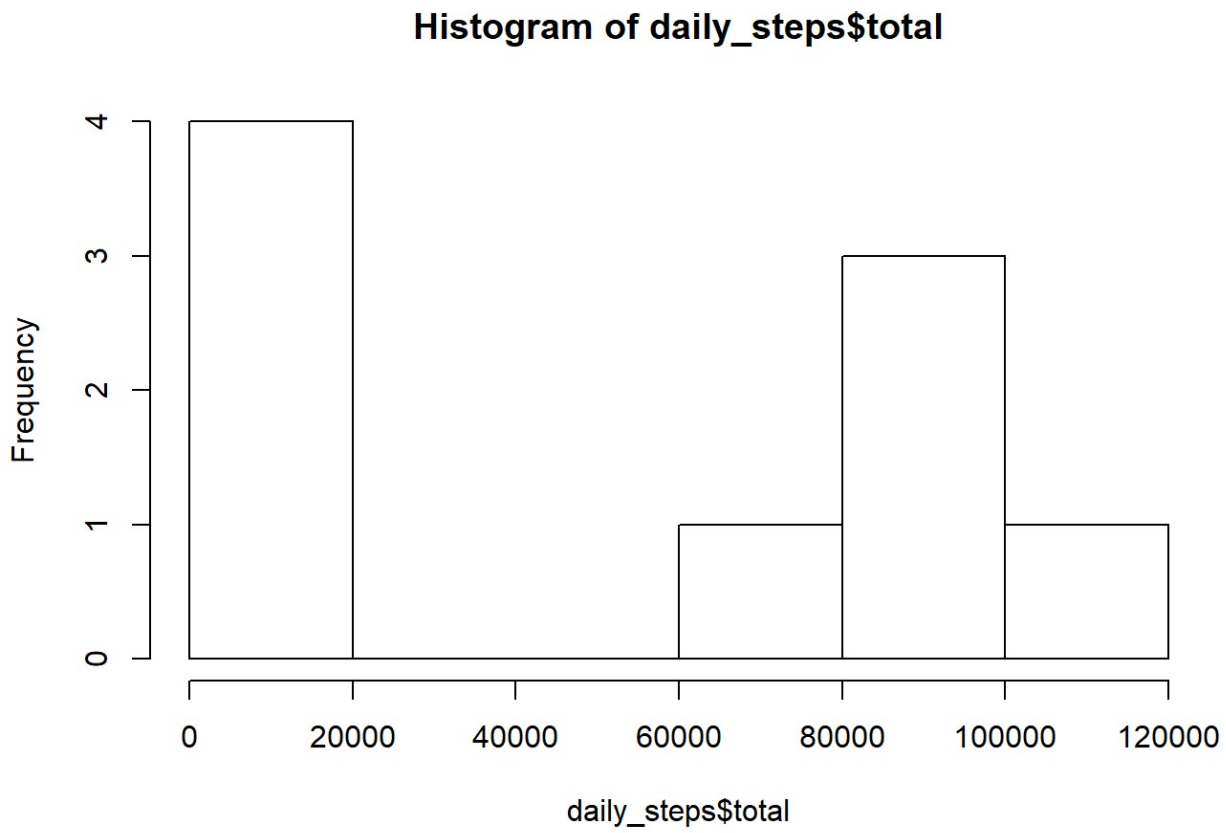
This says how I'm imputing values.

Impute values by taking the average of the preceeding and subsequent intervals. The values in the resulting histogram differ, but not very meaningfully.

```
data <- data[sort(data$interval),]
data$steps <- na_ma(data$steps, k = 1)
daily_steps <- data %>% group_by(date) %>% summarize(total = sum(steps, na.rm
= TRUE)
                              ,mean = mean(steps, na.rm = TRUE)
                              ,median = median(steps,na.rm=TRUE))
```

```
## `summarise()` ungrouping output (override with `.groups` argument)
```

```
hist(daily_steps$total)
```




```
data$weekday <- weekdays(data$date)
data$weekend <- 'Weekday'
data$weekend[data$weekday %in% c('Saturday', 'Sunday')] <- 'Weekend'
data2 <- data %>% group_by(interval, weekend) %>% summarize(steps = sum(steps))
```

```
## `summarise()` regrouping output by 'interval' (override with `.groups` argum
ent)
```

```
par(mfrow=c(2,1))
with(data2[data2$weekend=='Weekday',],
  plot(x=interval, y = steps,type = 'l', main = 'Weekday'))
with(data2[data2$weekend=='Weekend',],
  plot(x=interval, y = steps,type = 'l',main = 'Weekend'))
```