

Reproducible Research: Peer Assessment 1

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Load required libraries

```
library(lattice)
library(knitr)
library(rmarkdown)
```

```
## Warning: package 'rmarkdown' was built under R version 3.3.2
```

```
opts_chunk$set(echo=FALSE, warning=FALSE, message=FALSE, error=FALSE, collapse=TRUE, tidy=TRUE, high=FALSE)
#opts_knit$set(progress=TRUE, verbose=TRUE)
```

Loading and preprocessing the data

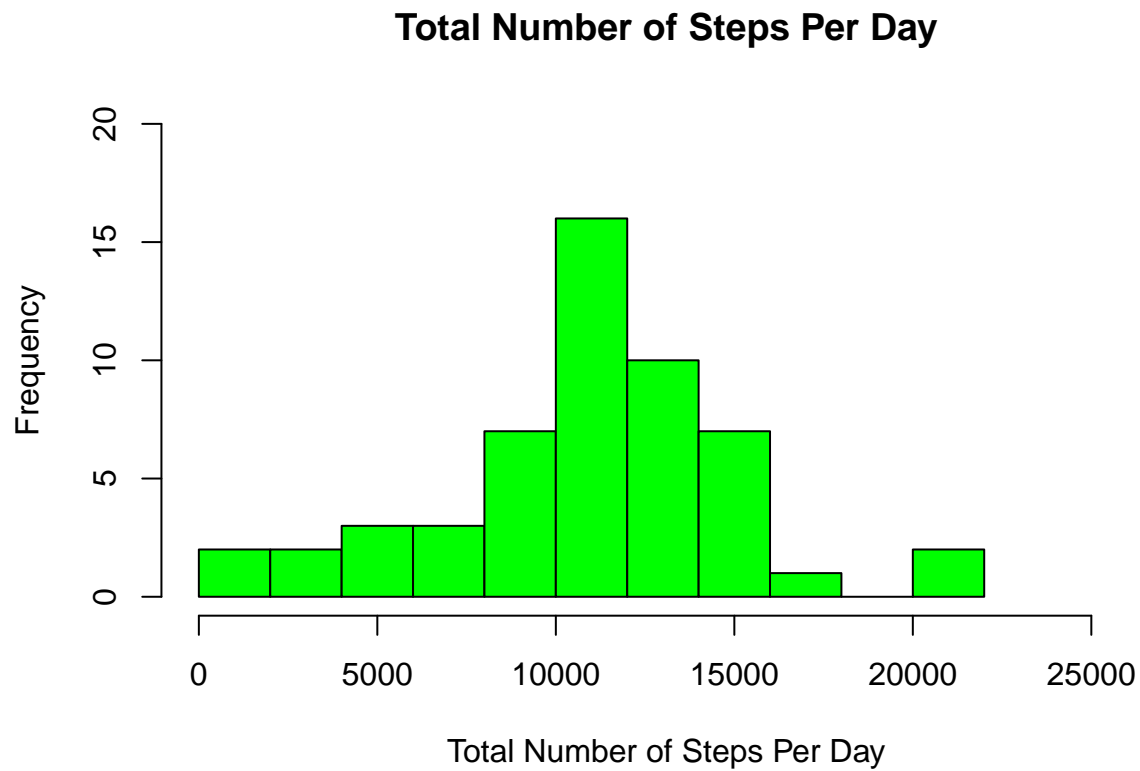
Print first few rows of data (this will give details of the columns)

	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

Display summary of the data loaded

	steps	date	interval
Min.	: 0.00	Min. :2012-10-01	Min. : 0.0
1st Qu.:	0.00	1st Qu.:2012-10-16	1st Qu.: 588.8
Median :	0.00	Median :2012-10-31	Median :1177.5
Mean :	37.38	Mean :2012-10-31	Mean :1177.5
3rd Qu.:	12.00	3rd Qu.:2012-11-15	3rd Qu.:1766.2
Max.	:806.00	Max. :2012-11-30	Max. :2355.0
NA's	:2304		

What is mean total number of steps taken per day?



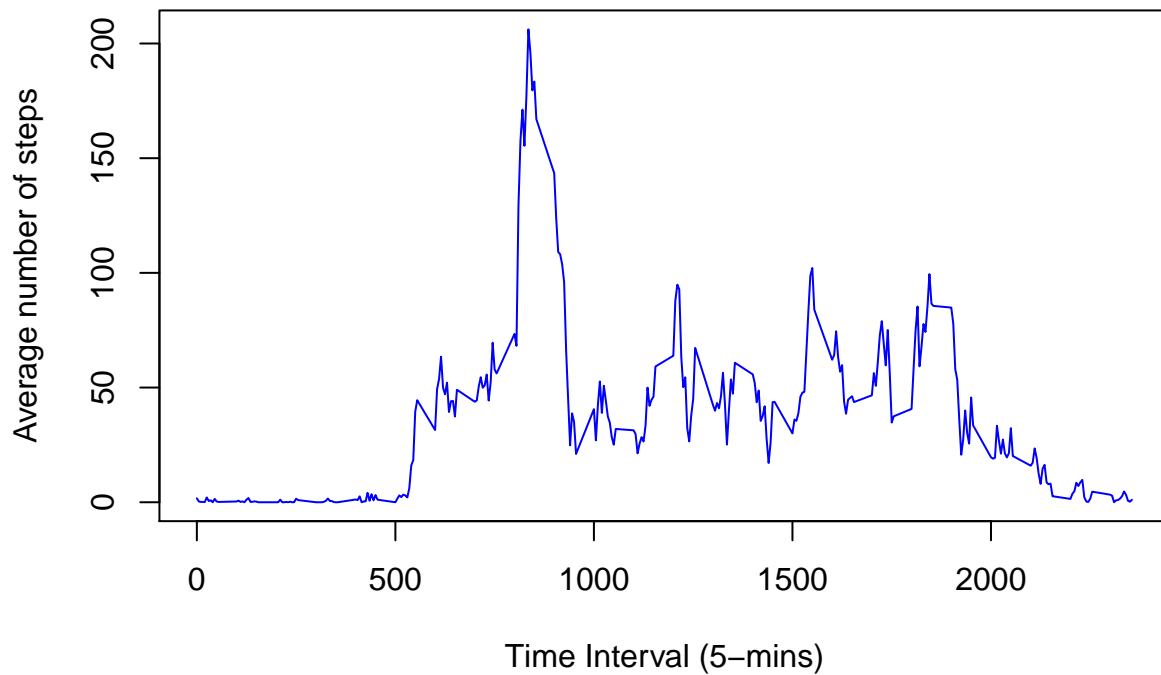
```
[1] "10,766.19"
```

```
[1] "10,765"
```

What is the average daily activity pattern?

	avg_steps	interval
1	1.7169811	0
2	0.3396226	5
3	0.1320755	10
4	0.1509434	15
5	0.0754717	20
6	2.0943396	25

Average Number of Steps by Time Interval

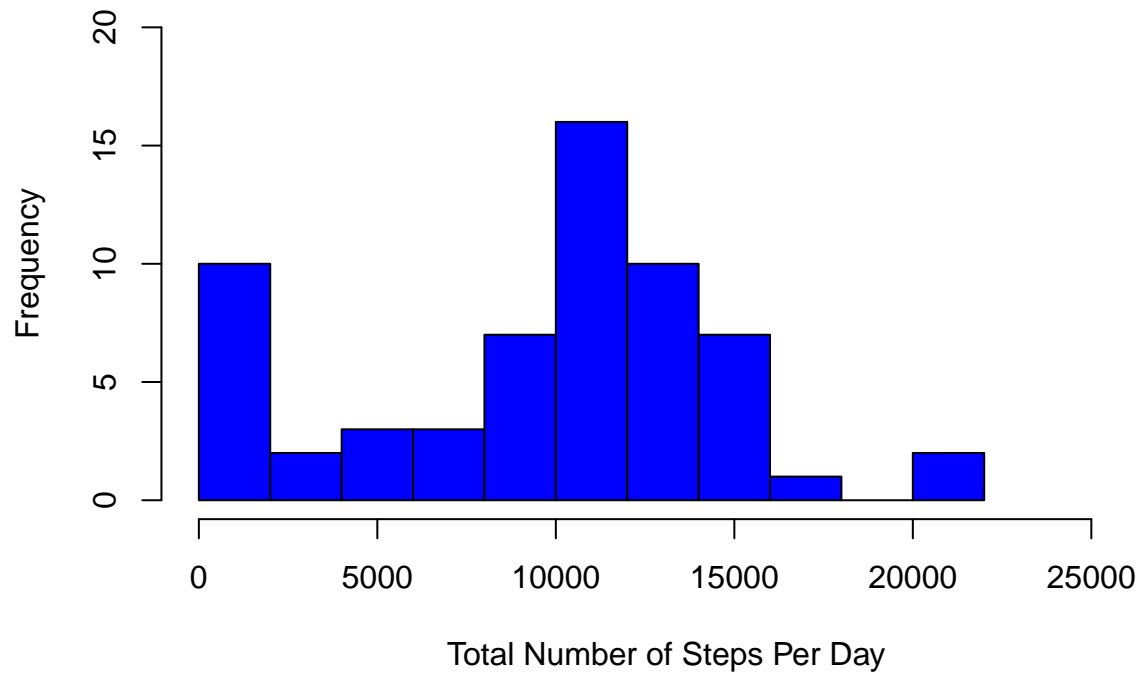


Imputing missing values

```
[1] "Print few records of clculated mean values."
  interval steps      date median_steps avg_steps
1         0   NA 2012-10-01           0  1.716981
2         0    0 2012-11-23           0  1.716981
3         0    0 2012-10-28           0  1.716981
4         0    0 2012-11-06           0  1.716981
5         0    0 2012-11-24           0  1.716981
6         0    0 2012-11-15           0  1.716981
[1] "Summary of dataset with missing data filled ..."
```

steps		date	interval	
Min. :	0.00	Min. :2012-10-01	Min. :	0.0
1st Qu.:	0.00	1st Qu.:2012-10-16	1st Qu.:	588.8
Median :	0.00	Median :2012-10-31	Median :	1177.5
Mean :	37.38	Mean :2012-10-31	Mean :	1177.5
3rd Qu.:	12.00	3rd Qu.:2012-11-15	3rd Qu.:	1766.2
Max. :	806.00	Max. :2012-11-30	Max. :	2355.0
NA's :	2304			

Total Number of Steps Per Day



	steps	date	interval	weekdays	week_day_factor
1	0	2012-10-01	0	FALSE	weekday
2	0	2012-11-23	0	FALSE	weekday
3	0	2012-10-28	0	TRUE	weekend
4	0	2012-11-06	0	FALSE	weekday
5	0	2012-11-24	0	TRUE	weekend
6	0	2012-11-15	0	FALSE	weekday

Average Number of Steps by Time Interval

