

Reproducible Research: Peer Assessment 1

Loading and preprocessing the data

```
filename <- "activity.csv"
all.data <- read.csv(filename, header=TRUE)

# Remove incomplete cases:
df.1 <- all.data[complete.cases(all.data),]

suppressPackageStartupMessages(library(xts))

# Create a tidy 'zoo' object:
datestamps <- as.POSIXct(df.1$date, format="%Y-%m-%d")
df.2 <- xts(cbind(df.1[, 3], df.1[, 1]), datestamps)
colnames(df.2) <- c("interval", "steps")
#class(df.2)
#colnames(df.2)
#head(df.2)
```

What is mean total number of steps taken per day?

```
steps.per.day <- apply.daily(df.2$steps, sum)
average.steps.per.day <- floor(mean(steps.per.day))
```

The mean total number of steps taken per day is 10766.

What is the average daily activity pattern?

Imputing missing values

Are there differences in activity patterns between weekdays and weekends?