Project 1 - Exploratory Data Analysis - Coursera

rgferreira

9, May 2015

Downloading, loading and previous transformation of data:

```r
if(!file.exists("exdata-data-household_power_consumption.zip")) {
        temp <- tempfile()
        download.file("http://d396qusza40orc.cloudfront.net/exdata%2Fdata%2Fhousehold_po
wer_consumption.zip",temp)
        file <- unzip(temp)
        unlink(temp)
}
dataSet <-read.table(file, sep=";", header = TRUE)
dataSet$Date <- as.Date(dataSet$Date, format="%d/%m/%Y")
dataSet <- dataSet[(dataSet$Date=="2007-02-01") | (dataSet$Date=="2007-02-02"),]
dataSet$Global_active_power <- as.numeric(as.character(dataSet$Global_active_power))
dataSet$Sub_metering_1 <- as.numeric(as.character(dataSet$Sub_metering_1))
dataSet$Sub_metering_2 <- as.numeric(as.character(dataSet$Sub_metering_2))
dataSet$Sub_metering_3 <- as.numeric(as.character(dataSet$Sub_metering_3))
dataSet <- transform(dataSet, DateTime=as.POSIXct(paste(Date, Time)), "%d/%m/%Y
%H:$M:$S")
```

Code for the first Plot:

```r
plot_1 <- function() {
    hist(dataSet$Global_active_power, main = paste("Global Active Power"), col="red", xl
ab="Global Active Power (kilowatts)")
    dev.copy(png, file="plot1.png", width=504, height=504)
    dev.off()
}
plot_1()
```
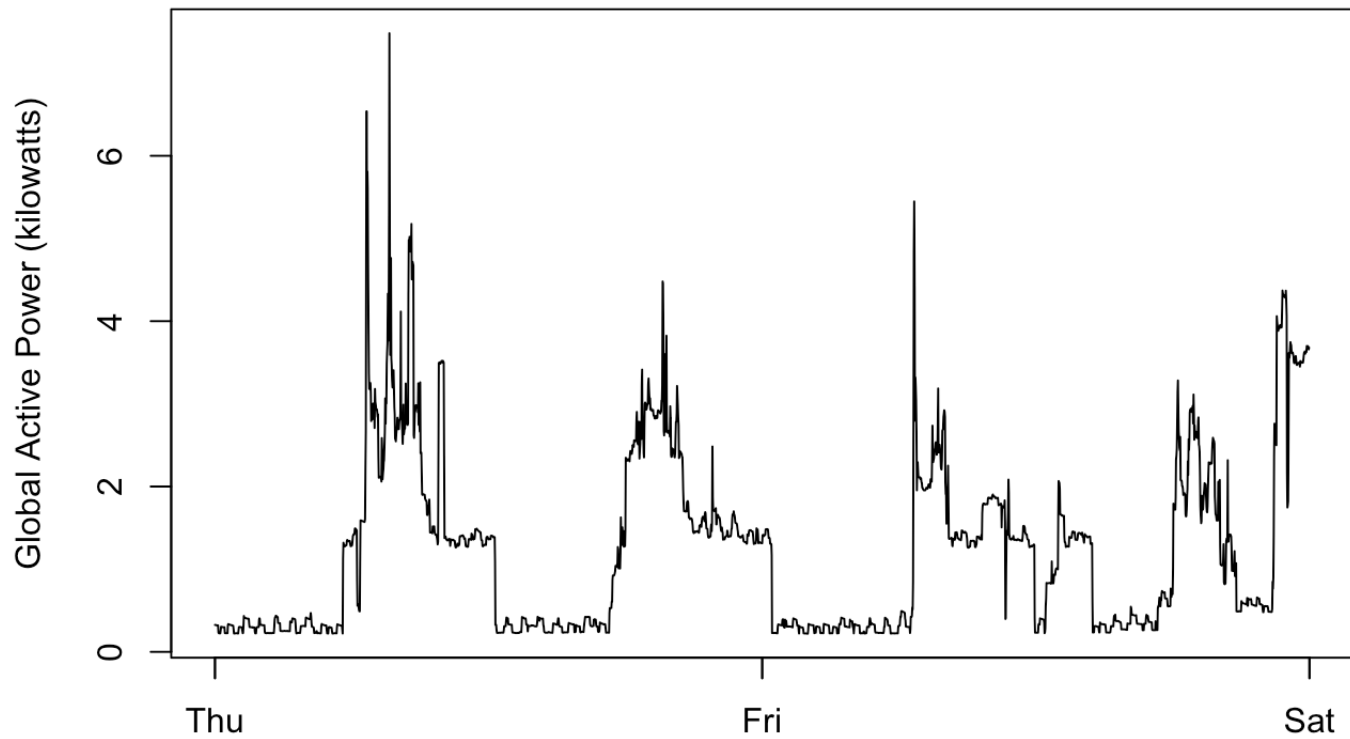
Global Active Power
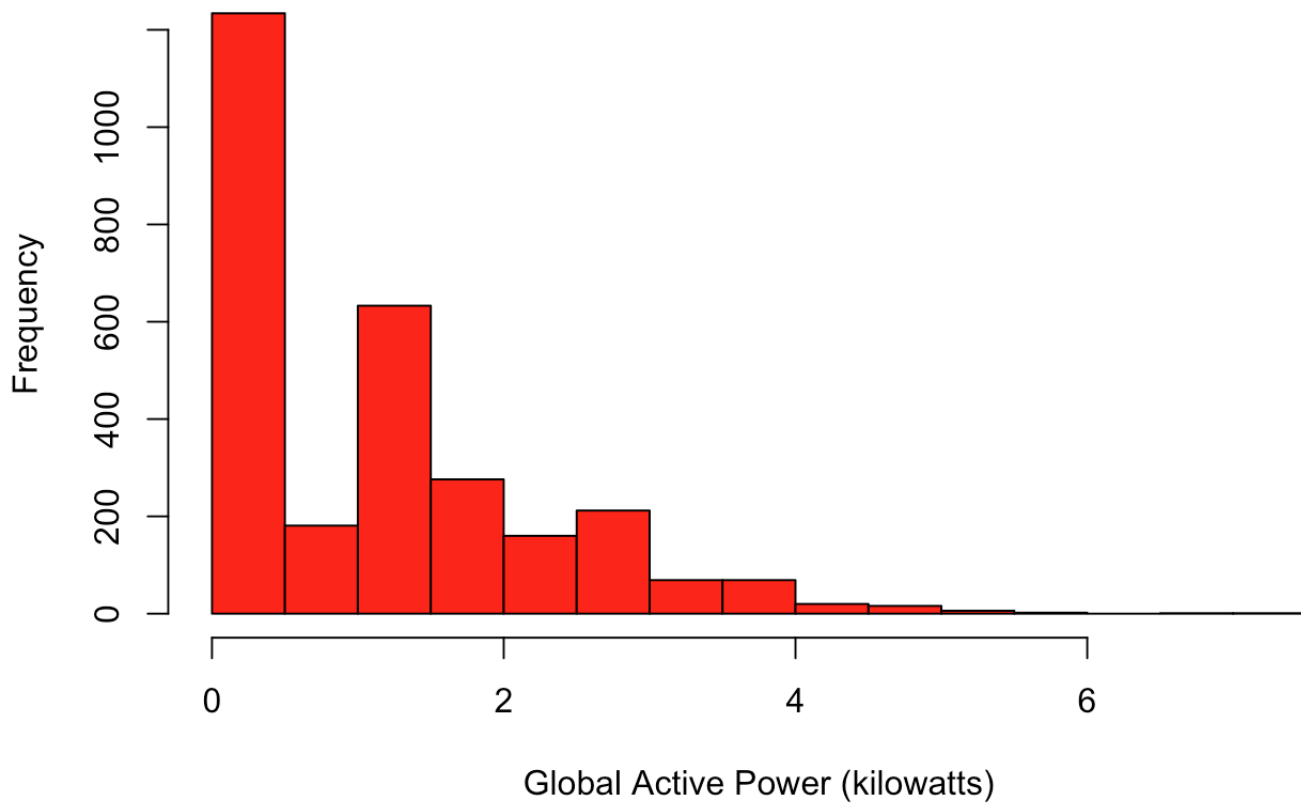

```
## quartz_off_screen
##                    2
```
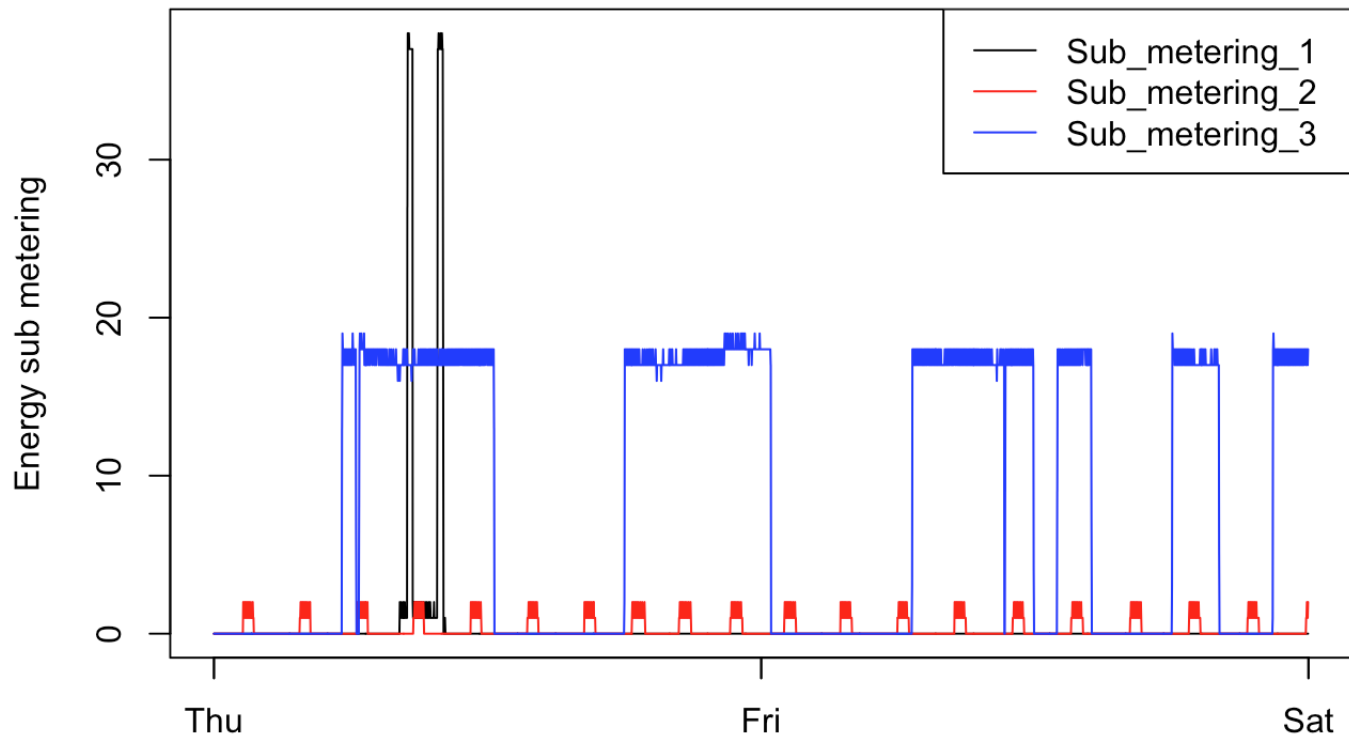
Code for the second Plot:

```
plot_2 <- function() {
        plot(dataSet$DateTime,dataSet$Global_active_power, type="l", xlab="", ylab="Glob
al Active Power (kilowatts)")
        dev.copy(png, file="plot2.png", width=504, height=504)
        dev.off()
}
plot_2()
```

```
## quartz_off_screen
##                      2
```

Code for the third Plot:

```
plot_3 <- function() {
        plot(dataSet$DateTime,dataSet$Sub_metering_1, type="l", xlab="", ylab="Energy su
b metering")
        lines(dataSet$DateTime,dataSet$Sub_metering_2,col="red")
        lines(dataSet$DateTime,dataSet$Sub_metering_3,col="blue")
        legend("topright", col=c("black","red","blue"), c("Sub_metering_1  ","Sub_meteri
ng_2  ", "Sub_metering_3  "),lty=c(1,1), lwd=c(1,1))
        dev.copy(png, file="plot3.png", width=504, height=504)
        dev.off()
}
plot_3()
```
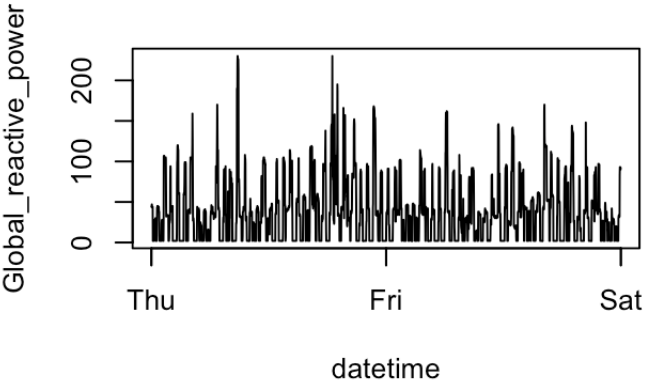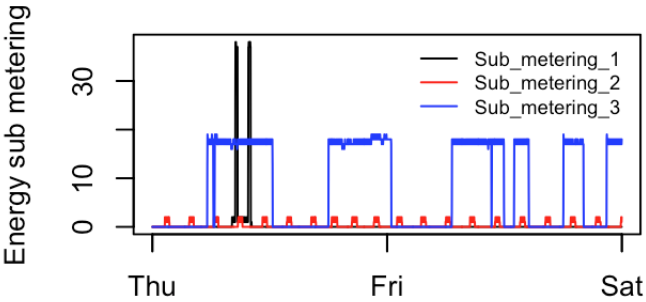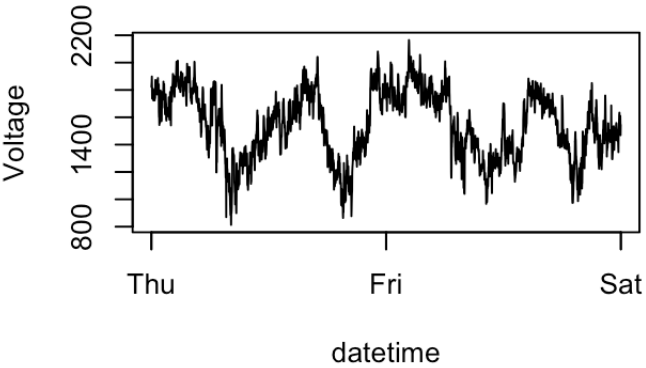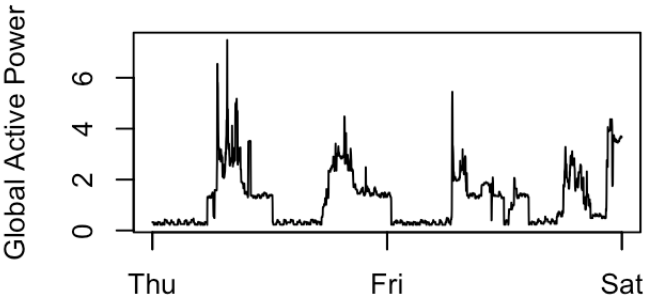
```
## quartz_off_screen
##                    2
```

Code for the fourth Plot:

```r
plot_4 <- function() {
        par(mfrow=c(2,2))
## Subplot 4.1
        plot(dataSet$DateTime,dataSet$Global_active_power, type="l", xlab="", ylab="Glob
al Active Power")
## Subplot 4.2
        plot(dataSet$DateTime,dataSet$Voltage, type="l", xlab="datetime", ylab="Voltag
e")
## Subplot 4.3
        plot(dataSet$DateTime,dataSet$Sub_metering_1, type="l", xlab="", ylab="Energy su
b metering")
        lines(dataSet$DateTime,dataSet$Sub_metering_2,col="red")
        lines(dataSet$DateTime,dataSet$Sub_metering_3,col="blue")
        legend("topright", col=c("black","red","blue"), c("Sub_metering_1  ","Sub_meteri
ng_2  ", "Sub_metering_3  "),lty=c(1,1), bty="n", cex=.7)
## Subplot 4.4
        plot(dataSet$DateTime,dataSet$Global_reactive_power, type="l", xlab="datetime",
ylab="Global_reactive_power")

        dev.copy(png, file="plot4.png", width=668, height=504)
        dev.off()


}
plot_4()
```

```
## quartz_off_screen
##                      2
```