Exploratory Data Analysis: Project 1

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Summary

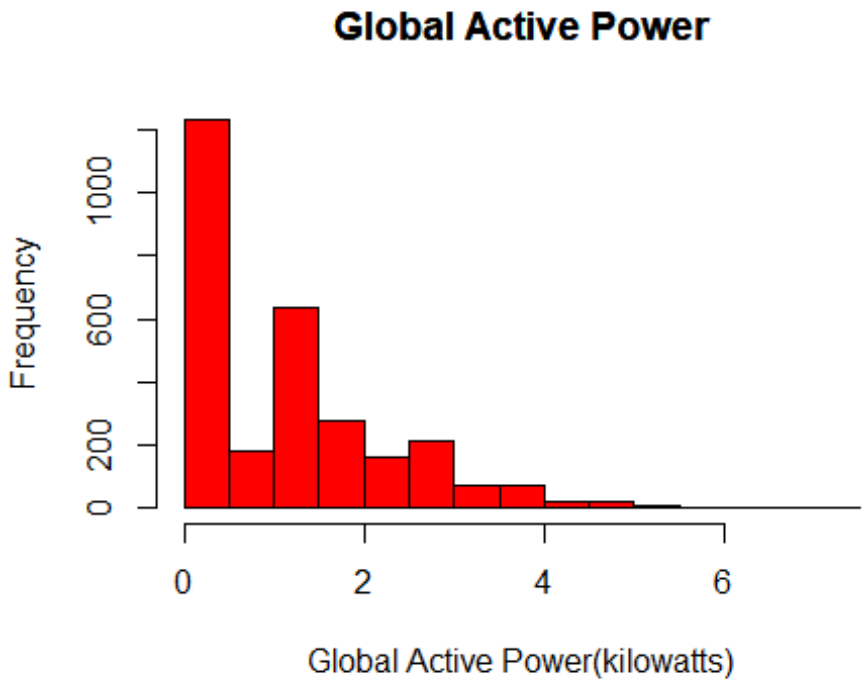
This project will provide the 4 pre given plots inside of the R file.

Plot 1

```
#Reading, naming and subsetting power consumption data
power <- read.table("household_power_consumption.txt",skip=1,sep=";")
names(power) <-
c("Date","Time","Global_active_power","Global_reactive_power","Voltage","Glob
al_intensity","Sub_metering_1","Sub_metering_2","Sub_metering_3")
subpower <- subset(power,power$Date=="1/2/2007" | power$Date =="2/2/2007")

#calling the basic plot function
hist(as.numeric(as.character(subpower$Global_active_power)),col="red",main="G
lobal Active Power",xlab="Global Active Power(kilowatts)")

# annotating graph
title(main="Global Active Power")
```



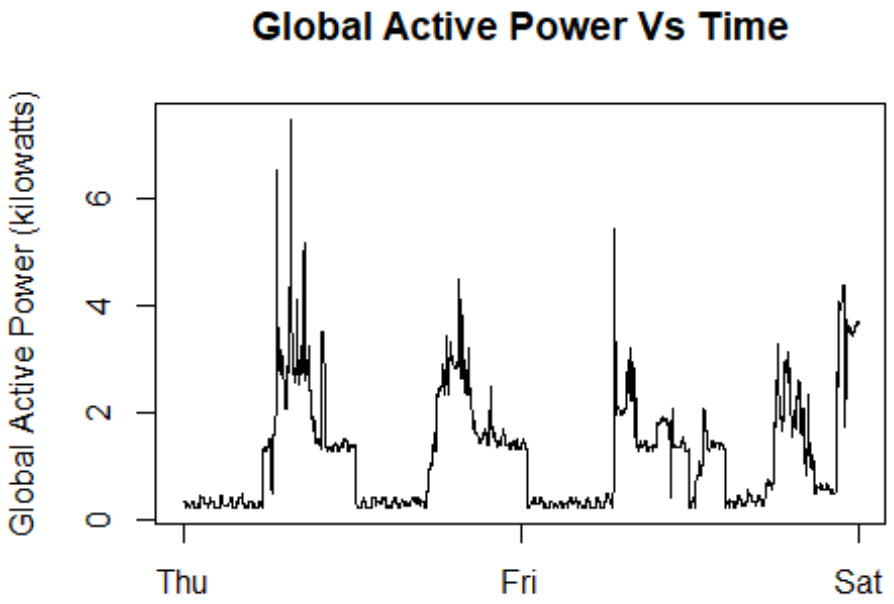
Plot 2

```
# Reading, naming and subsetting power consumption data
power <- read.table("household_power_consumption.txt",skip=1,sep=";")
names(power) <-
c("Date","Time","Global_active_power","Global_reactive_power","Voltage","Glob
al_intensity","Sub_metering_1","Sub_metering_2","Sub_metering_3")
subpower <- subset(power,power$Date=="1/2/2007" | power$Date =="2/2/2007")

# Transforming the Date and Time vars from characters into objects of type
Date and POSIXlt respectively
subpower$Date <- as.Date(subpower$Date, format="%d/%m/%Y")
subpower$Time <- strptime(subpower$Time, format="%H:%M:%S")
subpower[1:1440,"Time"] <- format(subpower[1:1440,"Time"],"2007-02-01
%H:%M:%S")
subpower[1441:2880,"Time"] <- format(subpower[1441:2880,"Time"],"2007-02-02
%H:%M:%S")


# calling the basic plot function
plot(subpower$Time,as.numeric(as.character(subpower$Global_active_power)),typ
e="l",xlab="",ylab="Global Active Power (kilowatts)")

# annotating graph
title(main="Global Active Power Vs Time")
```



Plot 3

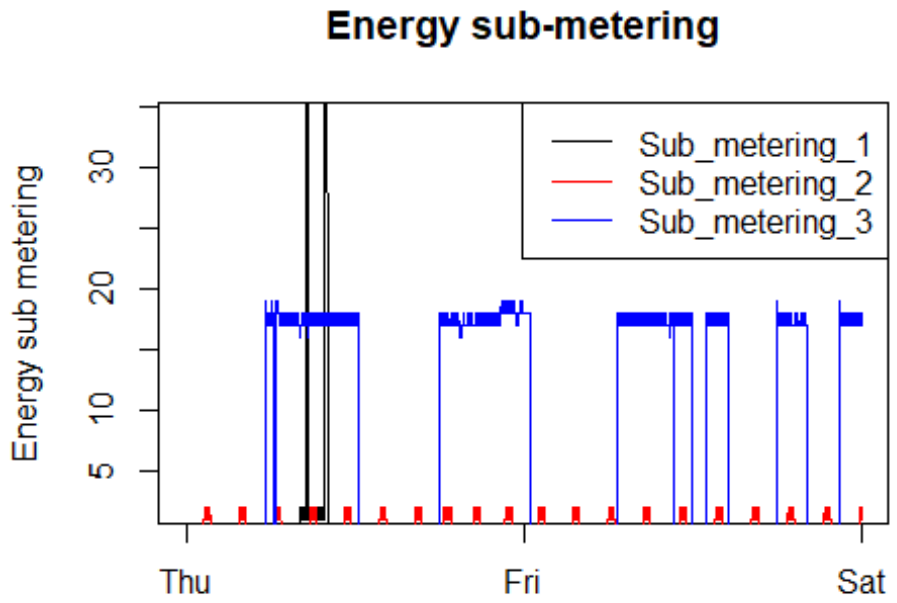
```
# Reading, naming and subsetting power consumption data
power <- read.table("household_power_consumption.txt",skip=1,sep=";")
names(power) <-
c("Date","Time","Global_active_power","Global_reactive_power","Voltage","Glob
al_intensity","Sub_metering_1","Sub_metering_2","Sub_metering_3")
subpower <- subset(power,power$Date=="1/2/2007" | power$Date =="2/2/2007")

# Transforming the Date and Time vars from characters into objects of type
Date and POSIXlt respectively
subpower$Date <- as.Date(subpower$Date, format="%d/%m/%Y")
subpower$Time <- strptime(subpower$Time, format="%H:%M:%S")
subpower[1:1440,"Time"] <- format(subpower[1:1440,"Time"],"2007-02-01
%H:%M:%S")
subpower[1441:2880,"Time"] <- format(subpower[1441:2880,"Time"],"2007-02-02
%H:%M:%S")


# calling the basic plot functions
plot(subpower$Time,subpower$Sub_metering_1,type="n",xlab="",ylab="Energy sub
metering")
with(subpower,lines(Time,as.numeric(as.character(Sub_metering_1))))
with(subpower,lines(Time,as.numeric(as.character(Sub_metering_2)),col="red"))
with(subpower,lines(Time,as.numeric(as.character(Sub_metering_3)),col="blue")
)
```

```
legend("topright", lty=1,
col=c("black","red","blue"),legend=c("Sub_metering_1","Sub_metering_2","Sub_m
etering_3"))

# annotating graph
title(main="Energy sub-metering")
```



Plot 4

```
# Reading, naming and subsetting power consumption data
power <- read.table("household_power_consumption.txt",skip=1,sep=";")
names(power) <-
c("Date","Time","Global_active_power","Global_reactive_power","Voltage","Glob
al_intensity","Sub_metering_1","Sub_metering_2","Sub_metering_3")
subpower <- subset(power,power$Date=="1/2/2007" | power$Date =="2/2/2007")

# Transforming the Date and Time vars from characters into objects of type
Date and POSIXlt respectively
subpower$Date <- as.Date(subpower$Date, format="%d/%m/%Y")
subpower$Time <- strptime(subpower$Time, format="%H:%M:%S")
subpower[1:1440,"Time"] <- format(subpower[1:1440,"Time"],"2007-02-01
%H:%M:%S")
subpower[1441:2880,"Time"] <- format(subpower[1441:2880,"Time"],"2007-02-02
%H:%M:%S")
```

```r
# initiating a composite plot with many graphs
par(mfrow=c(2,2))

# calling the basic plot function that calls different plot functions to
build the 4 plots that form the graph
with(subpower,{

plot(subpower$Time,as.numeric(as.character(subpower$Global_active_power)),typ
e="l",  xlab="",ylab="Global Active Power")
  plot(subpower$Time,as.numeric(as.character(subpower$Voltage)),
type="l",xlab="datetime",ylab="Voltage")
  plot(subpower$Time,subpower$Sub_metering_1,type="n",xlab="",ylab="Energy
sub metering")
   with(subpower,lines(Time,as.numeric(as.character(Sub_metering_1))))

with(subpower,lines(Time,as.numeric(as.character(Sub_metering_2)),col="red"))

with(subpower,lines(Time,as.numeric(as.character(Sub_metering_3)),col="blue")
)
   legend("topright", lty=1,
col=c("black","red","blue"),legend=c("Sub_metering_1","Sub_metering_2","Sub_m
etering_3"), cex = 0.6)

plot(subpower$Time,as.numeric(as.character(subpower$Global_reactive_power)),t
ype="l",xlab="datetime",ylab="Global_reactive_power")
})
```