

CMPT 318 Group Assignment 1:

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Q1)

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~/CMPT 318/CMPT318GroupAssignment1/
> cat(sprintf("Arithmetic Mean of Global_active_power: %.10f
+ Geometric Mean of Global_active_power: %.10f
+ Arithmetic Median of Global_active_power ..." ... [TRUNCATED]
Arithmetic Mean of Global_active_power: 1.8413394296
Geometric Mean of Global_active_power: 1.3582321344
Arithmetic Median of Global_active_power: 1.6503500000
Mode of Global_active_power: 0.2400000000
Standard Deviation of Global_active_power: 1.3089169141
Arithmetic Mean of Global_reactive_power: 0.1244783730
Geometric Mean of Global_reactive_power: 0.2776524698
Arithmetic Median of Global_reactive_power: 0.1060000000
Mode of Global_reactive_power: 0.0000000000
Standard Deviation of Global_reactive_power: 0.1275377485
Arithmetic Mean of Voltage: 240.2802371032
Geometric Mean of Voltage: 240.2578971296
Arithmetic Median of Voltage: 240.3400000000
Mode of Voltage: 238.3500000000
Standard Deviation of Voltage: 3.2728886071
> daysOfTheWeek <- as.POSIXlt(ourData$date, format = "%d/%m/%Y")$wday
> weekdaysDay <- subset(ourData, daysOfTheWeek != 0 & daysOfTheWeek != 6 & ourData$time >= a

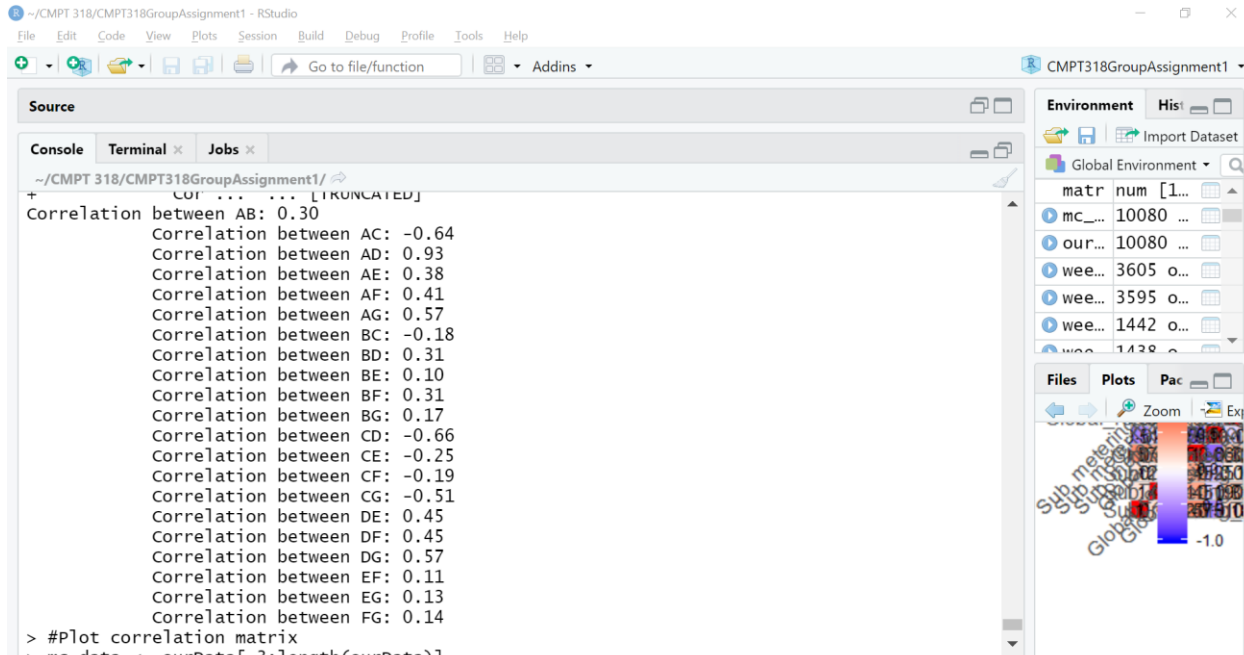
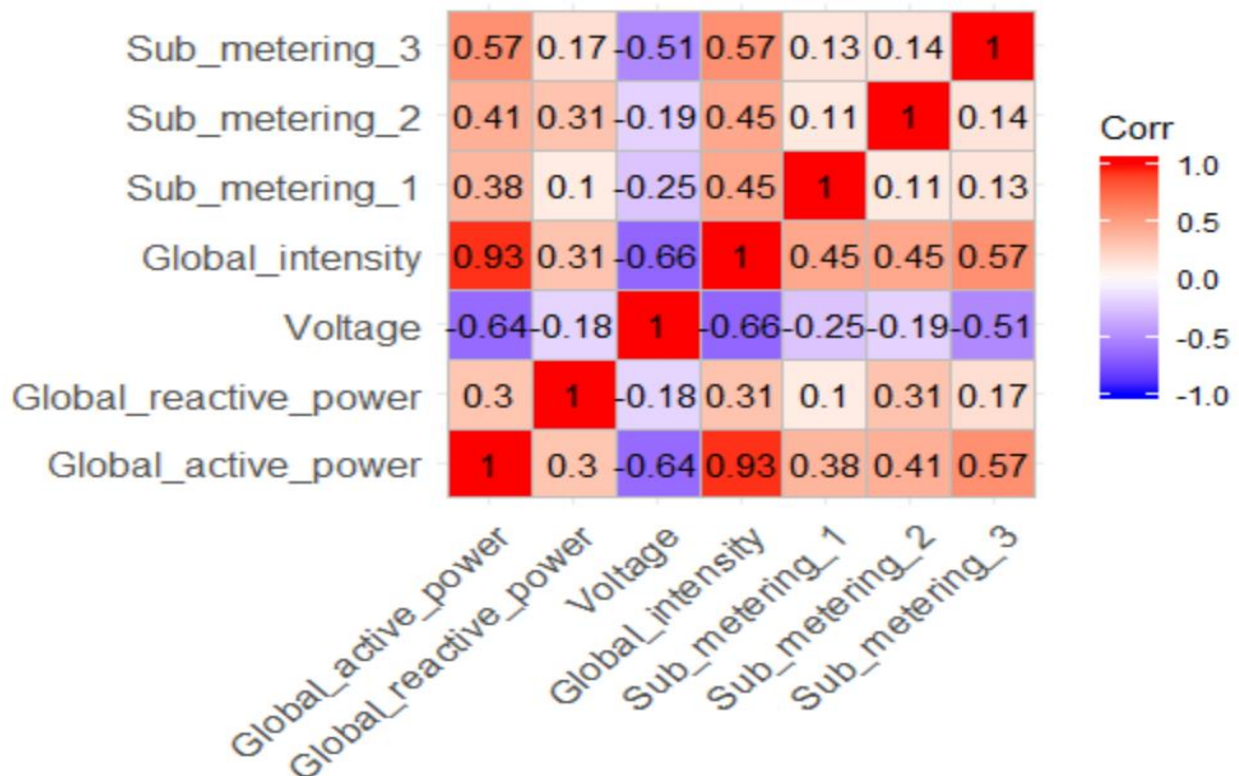
```

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~/CMPT 318/CMPT318GroupAssignment1/
> weekendsNightTime <- min(weekendsNight$Global_reactive_power, na.rm = TRUE)
> cat(sprintf("Maximum global active power on weekends during day hours: %.10f
+ Minimum global active power on weekends during day hours ..." ... [TRUNCATED]
Maximum global active power on weekends during day hours: 6.4800000000
Minimum global active power on weekends during day hours: 0.2240000000
Maximum global active power on weekends during night hours: 8.0216000000
Minimum global active power on weekends during night hours: 0.2200000000
Maximum global active power on weekdays during day hours: 6.5900000000
Minimum global active power on weekdays during day hours: 0.2280000000
Maximum global active power on weekdays during night hours: 5.8020000000
Minimum global active power on weekdays during night hours: 0.2200000000
Maximum global reactive power on weekends during day hours: 0.6940000000
Minimum global reactive power on weekends during day hours: 0.0000000000
Maximum global reactive power on weekends during night hours: 0.7600000000
Minimum global reactive power on weekends during night hours: 0.0000000000
Maximum global reactive power on weekdays during day hours: 0.8740000000
Minimum global reactive power on weekdays during day hours: 0.0000000000
Maximum global reactive power on weekdays during night hours: 0.6960000000
Minimum global reactive power on weekdays during night hours: 0.0000000000
>

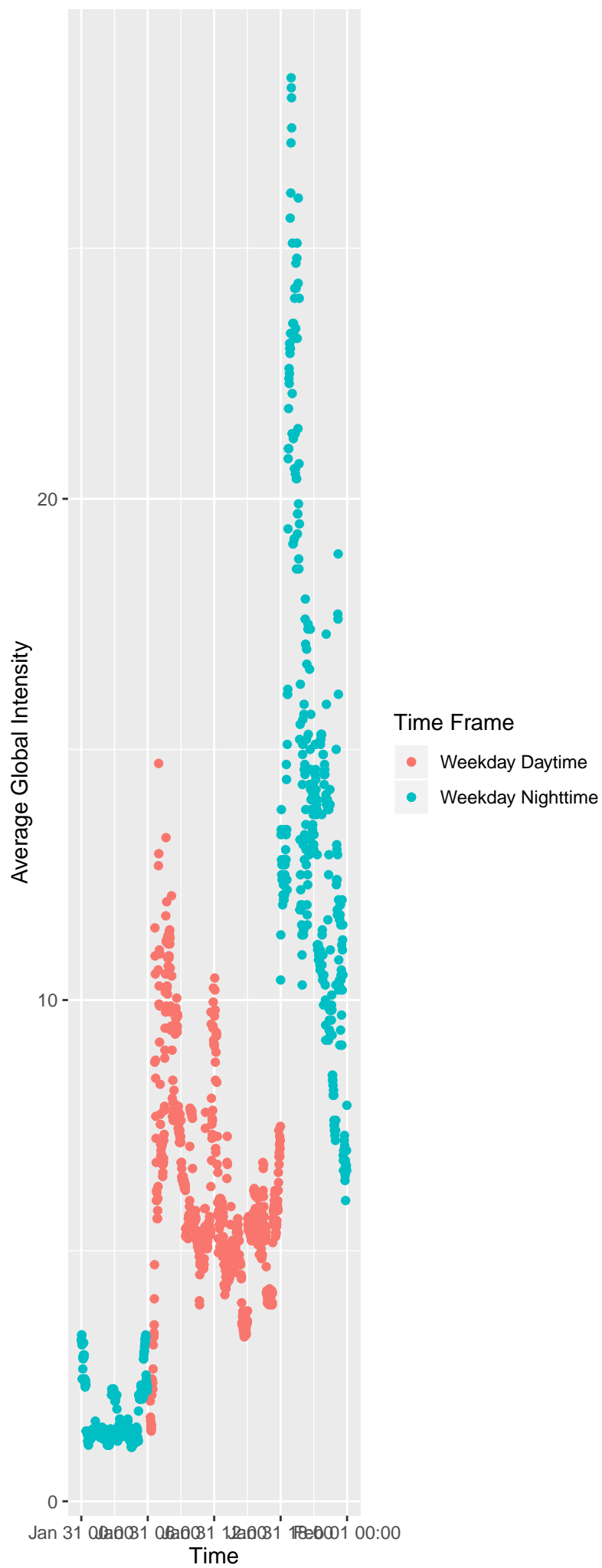
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Q2) Using Library “ggcorrplot” to plot correlation matrix

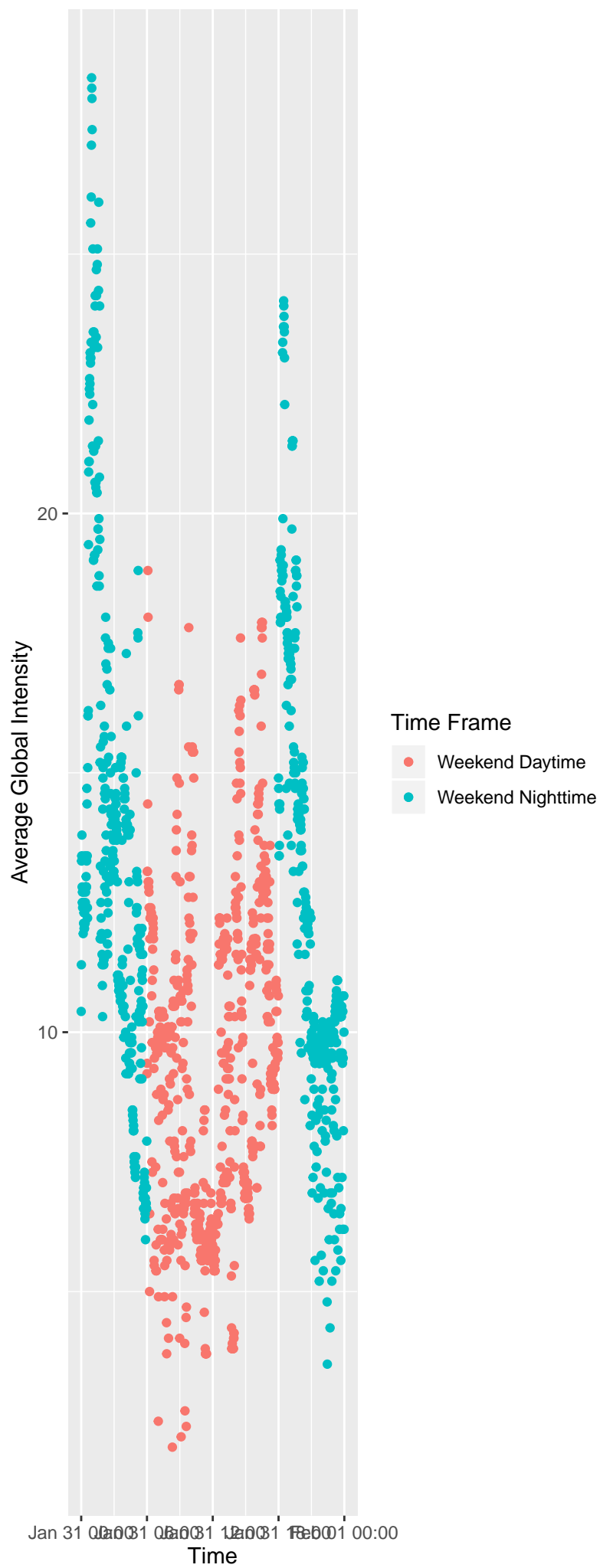


Question 3 plots in next 2 pages (page 3 & 4)

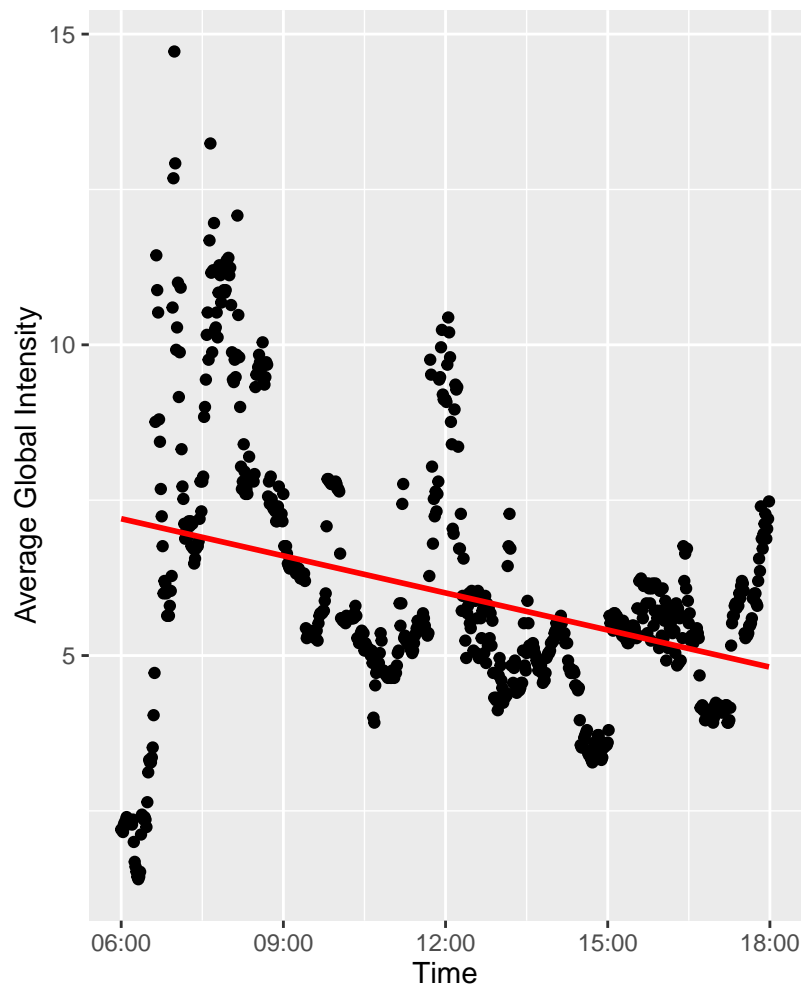
Weekday Averages



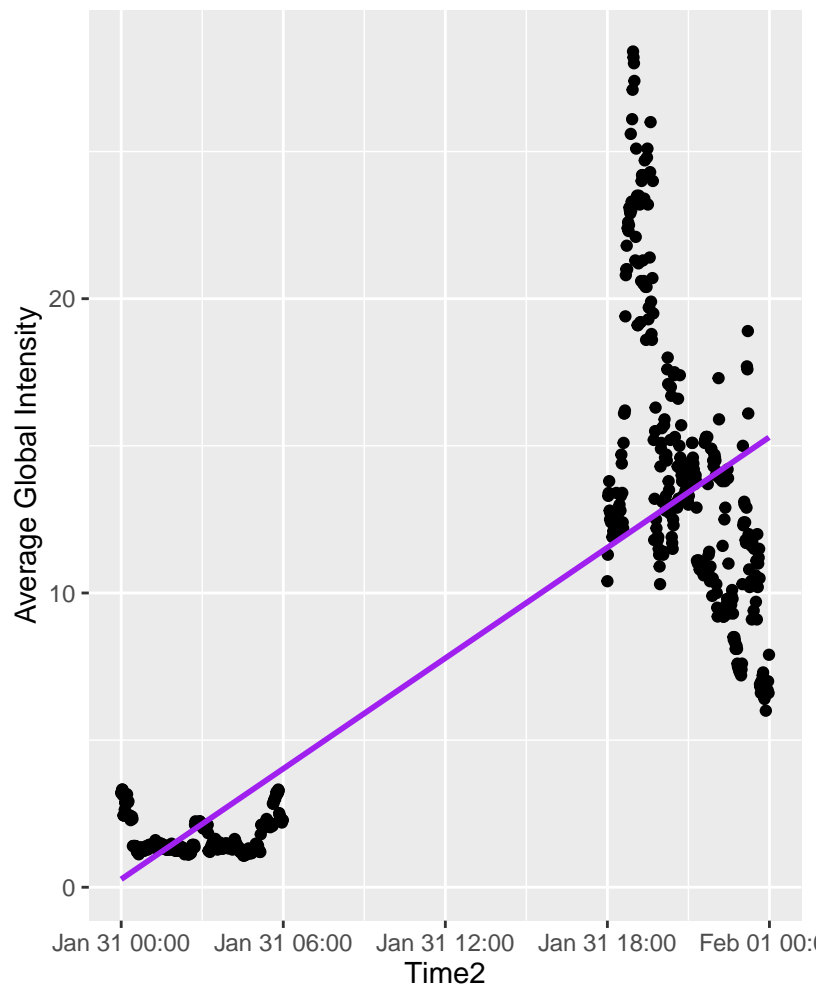
Weekend Averages



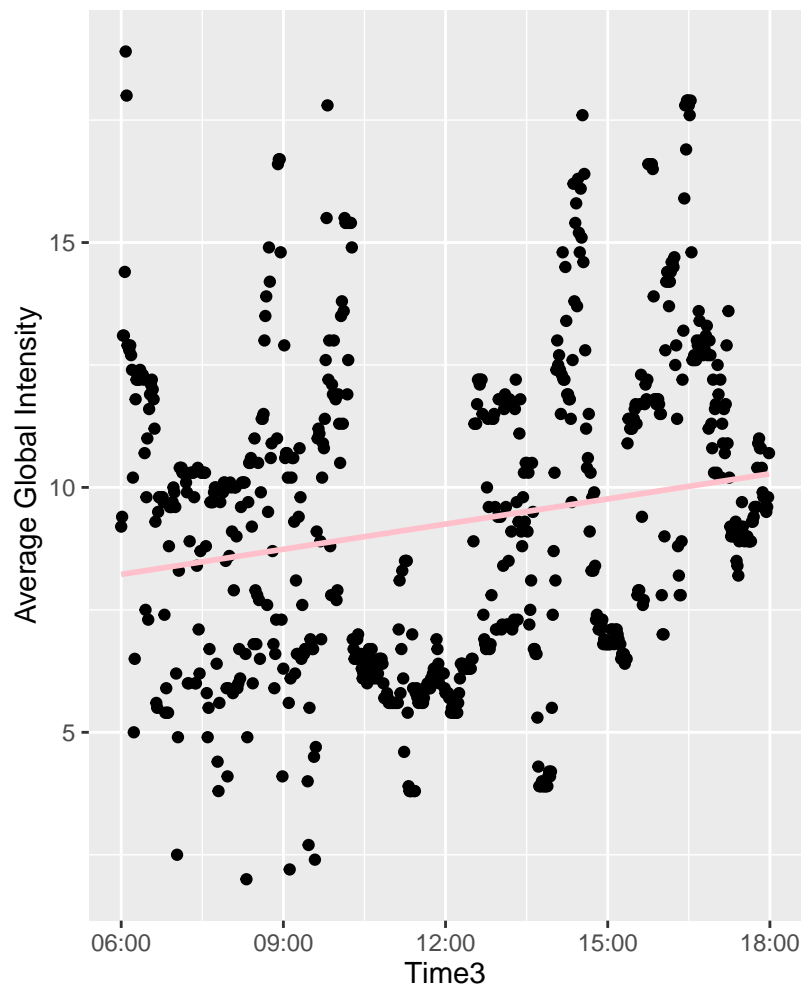
Weekday Daytime Linear Fit



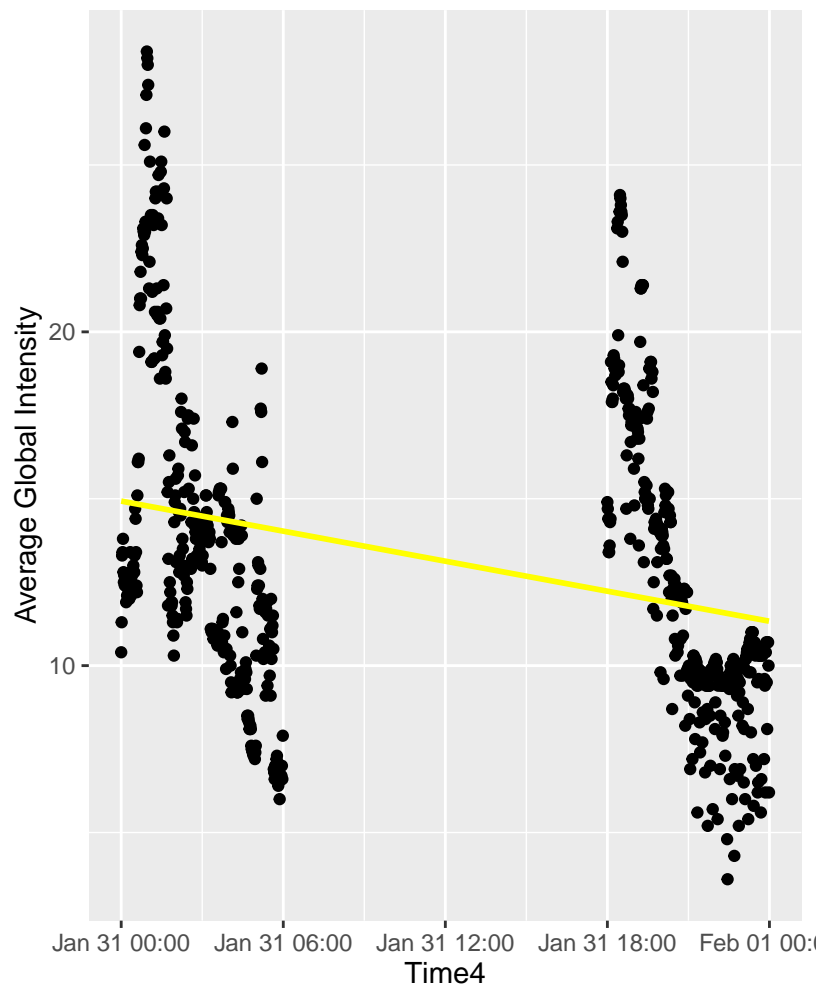
Weekday Nighttime Linear Fit



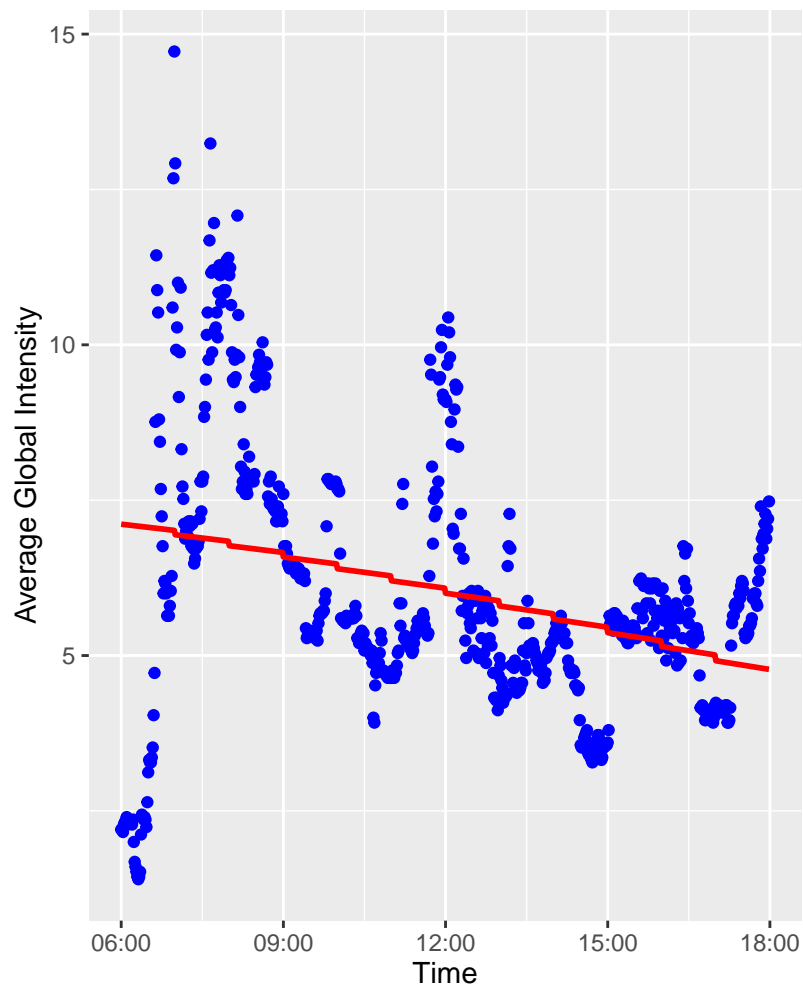
Weekend Daytime Linear Fit



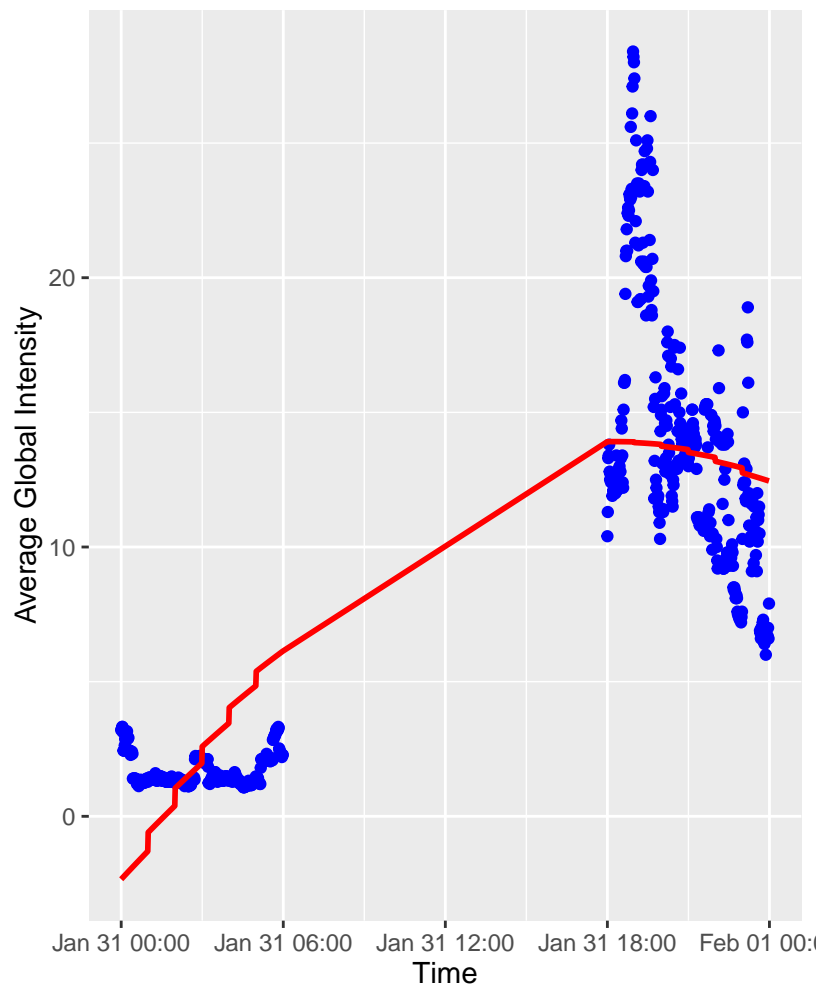
Weekend Nighttime Linear Fit



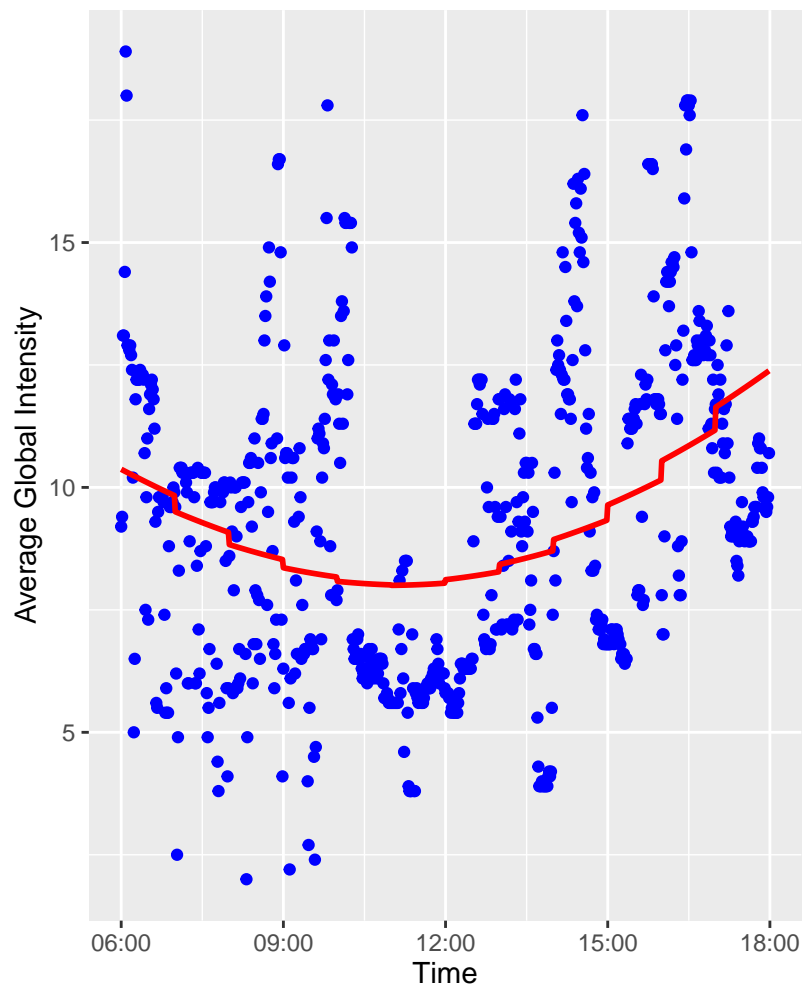
Weekday Daytime Polynomial Fit



Weekday Nighttime Polynomial Fit



Weekend Daytime Polynomial Fit



Weekend Nighttime Polynomial Fit

