Spray Data

> *The City of Chicago also does spraying to kill mosquitos. You are given the GIS data for their spray efforts in 2011 and 2013. Spraying can reduce the number of mosquitos in the area, and therefore might eliminate the appearance of West Nile virus. (From https://www.kaggle.com/c/predict-west-nile-virus/data)*

Read the Spray data

```
spray.data <- read.csv("../data/spray.csv")
dim(spray.data)
```

```
## [1] 14835     4
```

```
str(spray.data)
```

```
## 'data.frame':    14835 obs. of  4 variables:
##  $ Date     : Factor w/ 10 levels "2011-08-29","2011-09-07",..: 1 1 1 1 1 1 1 1 1 1 ...
##  $ Time     : Factor w/ 8583 levels "10:00:01 PM",..: 2331 2332 2333 2334 2335 2336 2337 2338 2339 23
##  $ Latitude : num  42.4 42.4 42.4 42.4 42.4 ...
##  $ Longitude: num  -88.1 -88.1 -88.1 -88.1 -88.1 ...
```

```
head(spray.data)
```

```
##         Date       Time Latitude Longitude
## 1 2011-08-29 6:56:58 PM 42.39162 -88.08916
## 2 2011-08-29 6:57:08 PM 42.39135 -88.08916
## 3 2011-08-29 6:57:18 PM 42.39102 -88.08916
## 4 2011-08-29 6:57:28 PM 42.39064 -88.08916
## 5 2011-08-29 6:57:38 PM 42.39041 -88.08886
## 6 2011-08-29 6:57:48 PM 42.39039 -88.08831
```

Transform the data type

```
spray.data$Date.Time <- strptime(paste(spray.data$Date, spray.data$Time),
                                 format="%Y-%m-%d %I:%M:%S %p")
spray.data$Date <- as.Date(spray.data$Date)
head(spray.data)
```

```
##         Date       Time Latitude Longitude           Date.Time
## 1 2011-08-29 6:56:58 PM 42.39162 -88.08916 2011-08-29 18:56:58
## 2 2011-08-29 6:57:08 PM 42.39135 -88.08916 2011-08-29 18:57:08
## 3 2011-08-29 6:57:18 PM 42.39102 -88.08916 2011-08-29 18:57:18
## 4 2011-08-29 6:57:28 PM 42.39064 -88.08916 2011-08-29 18:57:28
## 5 2011-08-29 6:57:38 PM 42.39041 -88.08886 2011-08-29 18:57:38
## 6 2011-08-29 6:57:48 PM 42.39039 -88.08831 2011-08-29 18:57:48
```