Assignment 1

R Markdown

```
#Load the dataset
InsuranceData<-read.csv("InsuranceData.csv")
head(InsuranceData)
```

```
##   policyID statecode      county eq_site_limit hu_site_limit fl_site_limit
## 1   119736        FL CLAY COUNTY      498960.0     498960.00      498960.0
## 2   448094        FL CLAY COUNTY     1322376.3    1322376.30     1322376.3
## 3   206893        FL CLAY COUNTY      190724.4     190724.40      190724.4
## 4   333743        FL CLAY COUNTY           0.0      79520.76           0.0
## 5   172534        FL CLAY COUNTY           0.0     254281.50           0.0
## 6   785275        FL CLAY COUNTY           0.0     515035.62           0.0
##   fr_site_limit   tiv_2011   tiv_2012 eq_site_deductible
## 1      498960.0  498960.00  792148.90                  0
## 2     1322376.3 1322376.30 1438163.57                  0
## 3      190724.4  190724.40  192476.78                  0
## 4           0.0   79520.76   86854.48                  0
## 5      254281.5  254281.50  246144.49                  0
## 6           0.0  515035.62  884419.17                  0
##   hu_site_deductible fl_site_deductible fr_site_deductible point_latitude
## 1             9979.2                  0                   0       30.10226
## 2                0.0                  0                   0       30.06394
## 3                0.0                  0                   0       30.08958
## 4                0.0                  0                   0       30.06324
## 5                0.0                  0                   0       30.06061
## 6                0.0                  0                   0       30.06324
##   point_longitude        line construction point_granularity
## 1       -81.71178 Residential      Masonry                 1
## 2       -81.70766 Residential      Masonry                 3
## 3       -81.70046 Residential         Wood                 1
## 4       -81.70770 Residential         Wood                 3
## 5       -81.70267 Residential         Wood                 1
## 6       -81.70770 Residential      Masonry                 3
```

```
#Descriptive Statistics
#1. Mean
mean(InsuranceData$hu_site_limit)
```

```
## [1] 2074348
```

```
#2. Median
median(InsuranceData$tiv_2011)
```

```
## [1] 202105.1
```

```
#3. Standard Deviation
sd(InsuranceData$hu_site_limit)
```

```
## [1] 19641497
```

```
#4. Variance
var(InsuranceData$point_granularity)
```

```
## [1] 1.146101
```

```
#5. Maximum Value
max(InsuranceData$eq_site_limit)
```

```
## [1] 2.16e+09
```

```
#6. Minimum value
min(InsuranceData$point_latitude)
```

```
## [1] 24.54751
```

```
#7. Range
range(InsuranceData$point_granularity)
```

```
## [1] 1 7
```

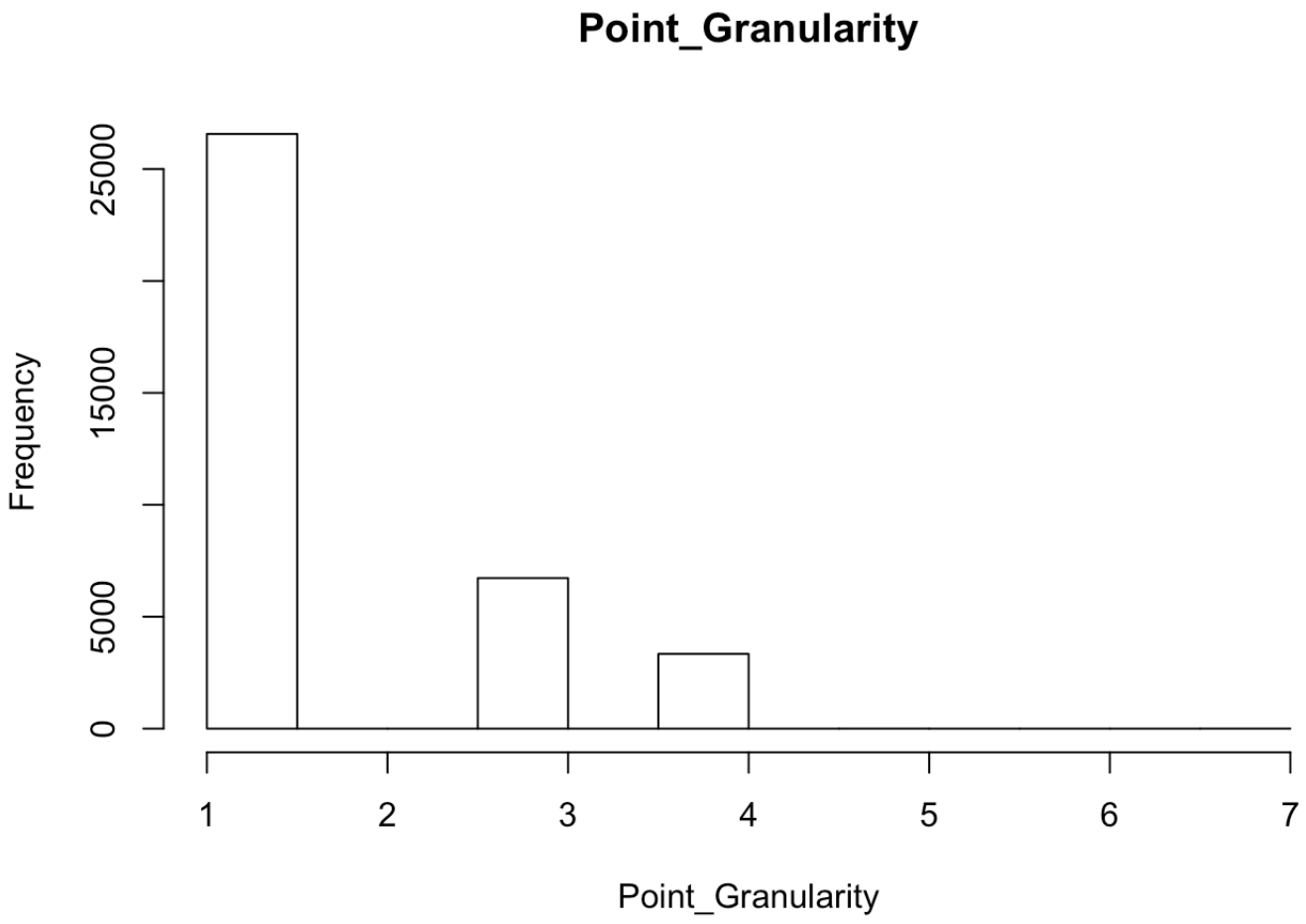
```
#8. Which Max (Determines the location)
which.max(InsuranceData$fl_site_limit)
```

```
## [1] 14103
```

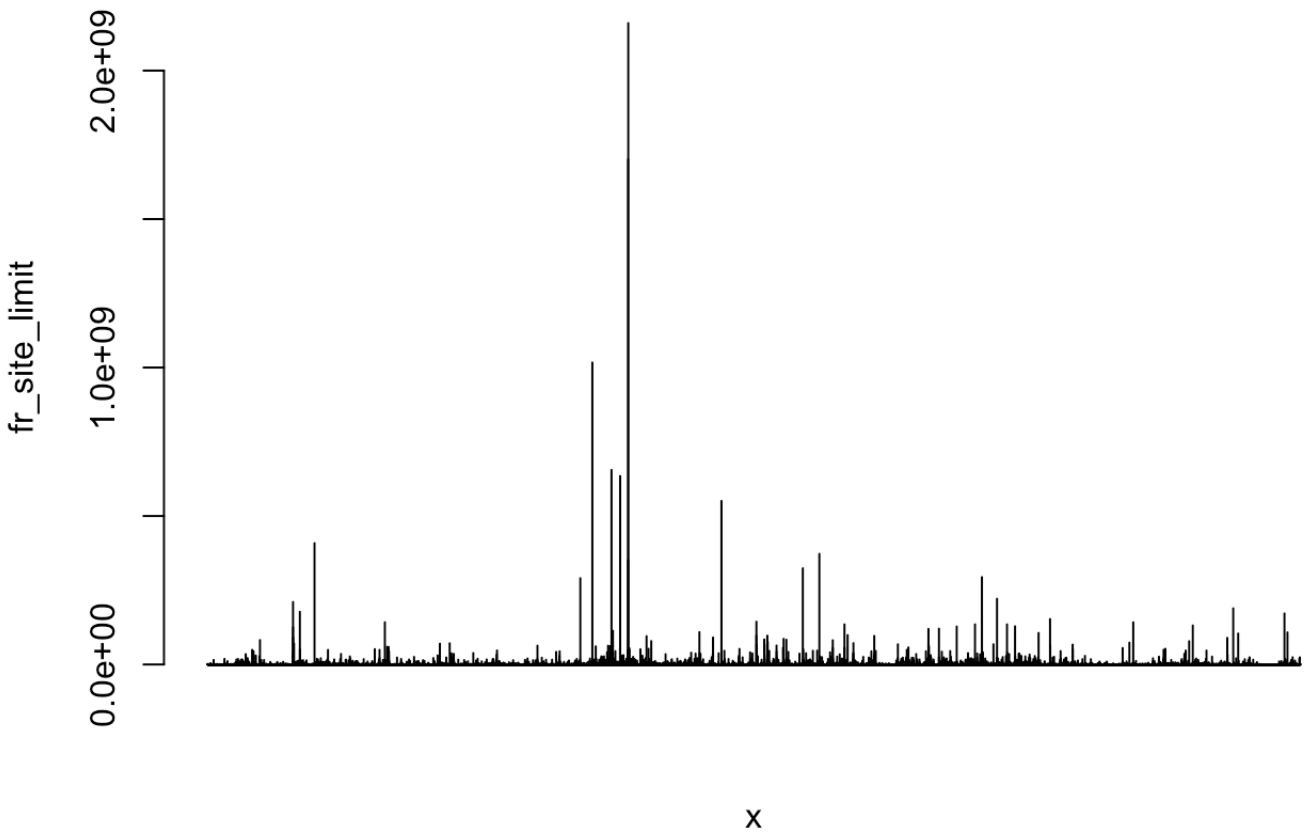
```
#9. Which Min (Determines the location)
which.min(InsuranceData$tiv_2011)
```

```
## [1] 7267
```

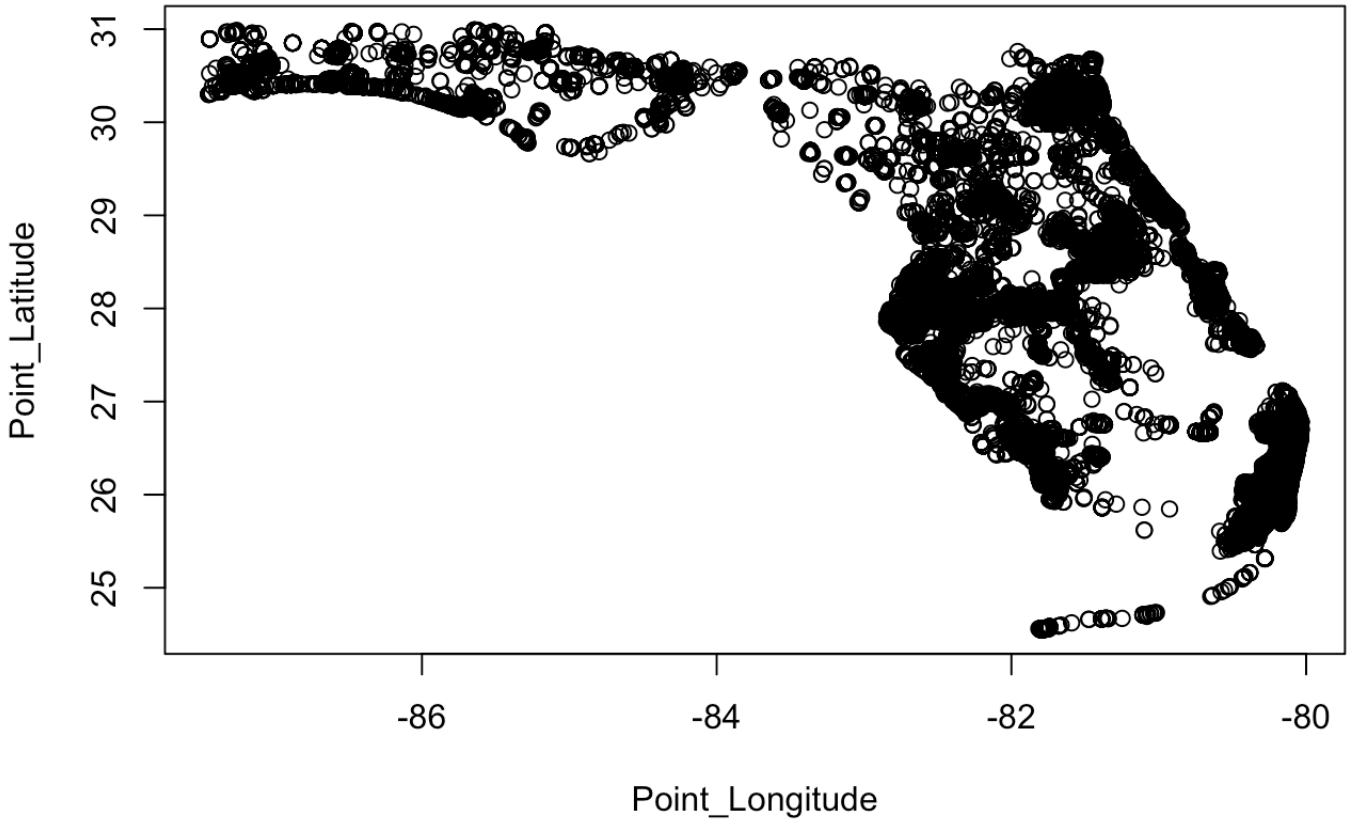
```
#Graphical Representation

#1. Histogram
hist(InsuranceData$point_granularity, xlab = "Point_Granularity", main = "Point_Granu
larity")
```




```
#2. Bar Plot
barplot(InsuranceData$fr_site_limit, xlab = "x",ylab = "fr_site_limit")
```



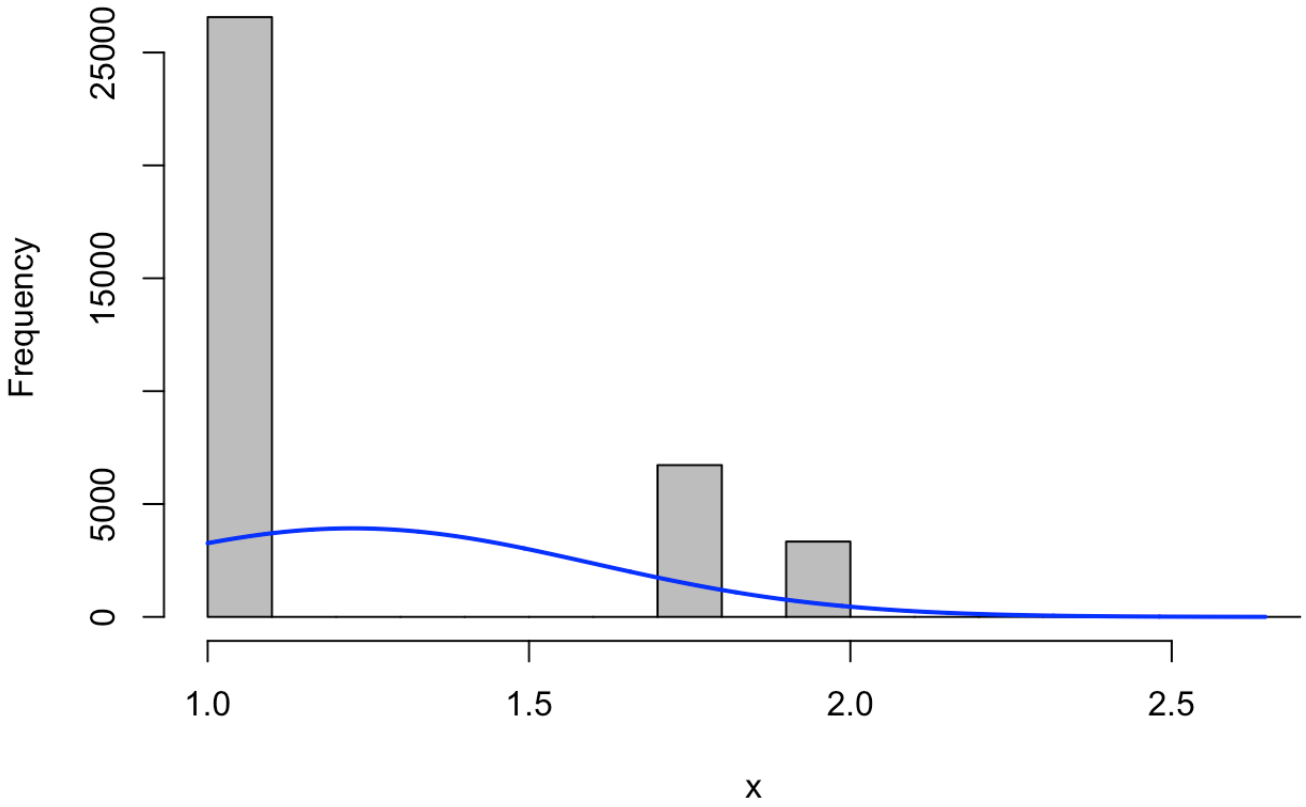

```
#3. Scatter Plots
plot.default(InsuranceData$point_longitude,InsuranceData$point_latitude, xlab = "Poin
t_Longitude", ylab = "Point_Latitude")
```




```
#Transformation

#1. Square Root Transformation
T_sqrt = sqrt(InsuranceData$point_granularity)
print(head(T_sqrt))
```

```
## [1] 1.000000 1.732051 1.000000 1.732051 1.000000 1.732051
```

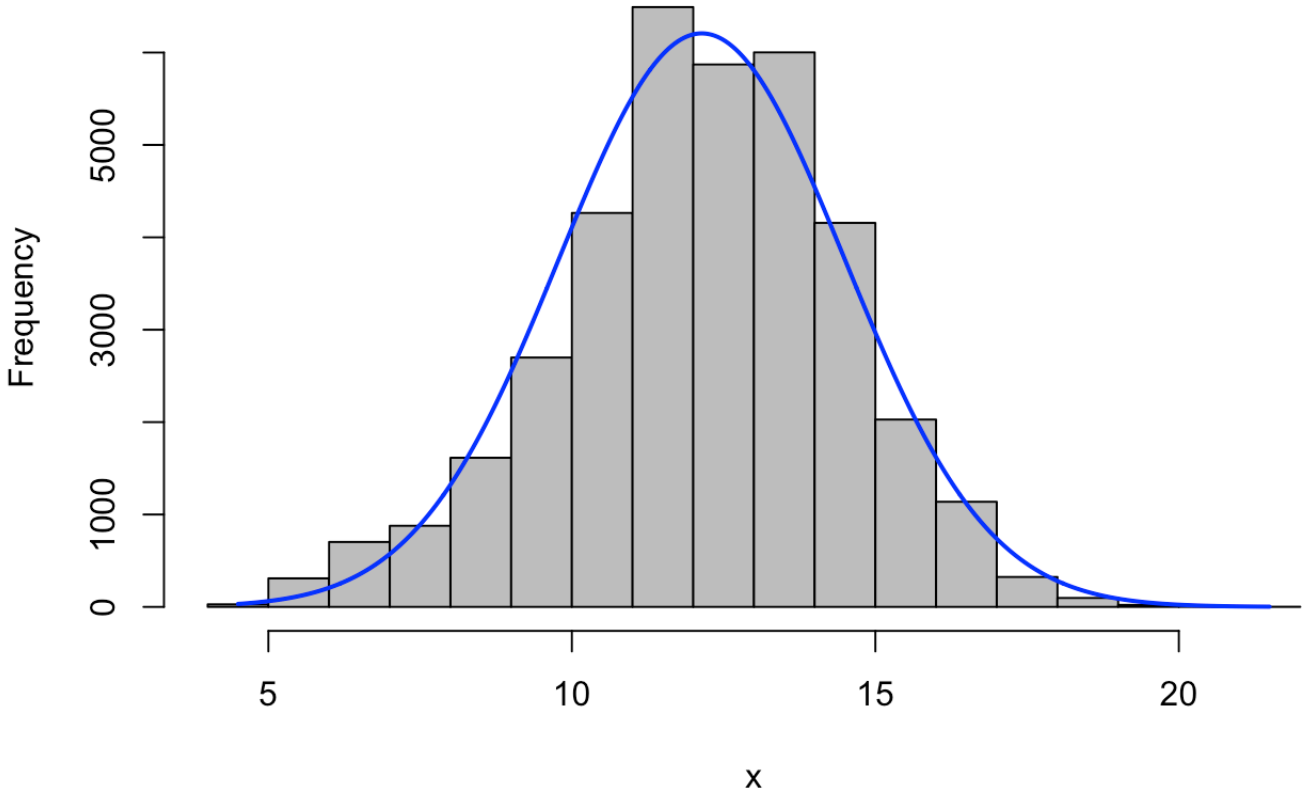
```
library(rcompanion)
plotNormalHistogram(T_sqrt)
```




```
#2. Log Transformation
T_log = log(InsuranceData$tiv_2011)
print(head(T_log))
```

```
## [1] 13.12028 14.09494 12.15858 11.28377 12.44620 13.15199
```

```
library(rcompanion)
plotNormalHistogram(T_log)
```



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.