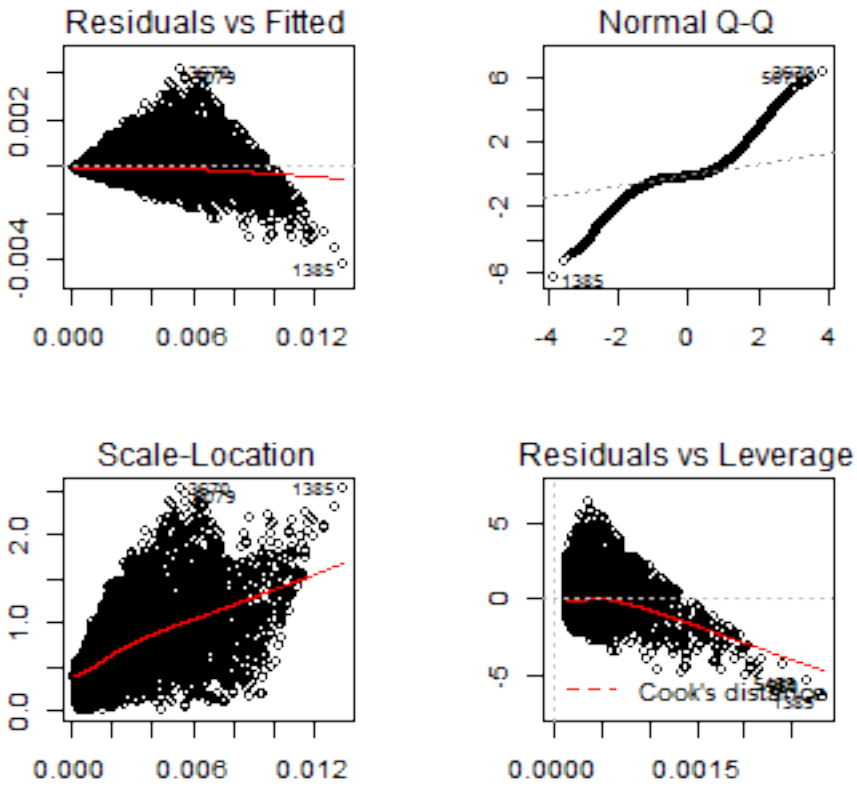
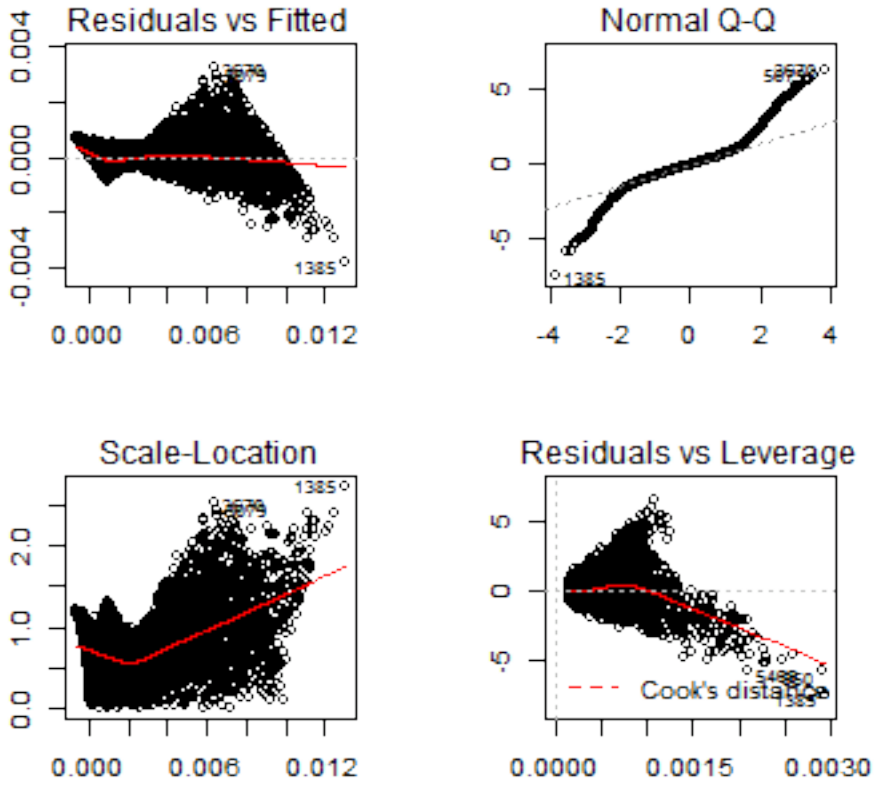
1 Risk ~ log(Parameters)

```
## Number of independent variables= 1
## Call:
## lm(formula = data$Risk ~ as.matrix(data_temp))
##
## Residuals:
##       Min        1Q    Median        3Q       Max
## -0.004124 -0.000192 -0.000109  0.000102  0.004112
##
## Coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)          1.35e-04   1.03e-05      13   <2e-16 ***
## as.matrix(data_temp) 3.89e-09   1.18e-11     328   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.000644 on 7075 degrees of freedom
## Multiple R-squared: 0.938,Adjusted R-squared: 0.938
## F-statistic: 1.08e+05 on 1 and 7075 DF,  p-value: <2e-16
##
##       R2 Adj_R2      RSS     ESS
## 3 0.9385 0.9385 0.002937 0.04479
```

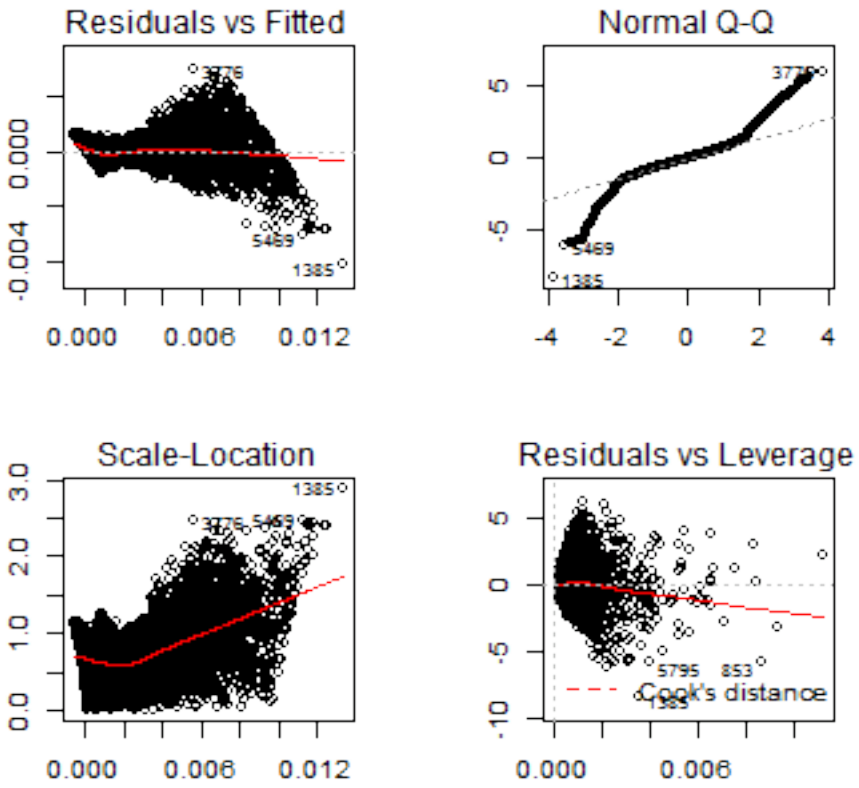


```
## Number of independent variables= 2
## Call:
## lm(formula = data$Risk ~ as.matrix(data_temp))
##
## Residuals:
##       Min        1Q    Median        3Q       Max
## -0.003747 -0.000254 -0.000021  0.000222  0.003198
##
## Coefficients:
##                                Estimate Std. Error t value Pr(>|t|)
## (Intercept)                    1.79e-03   2.57e-05    69.6   <2e-16 ***
## as.matrix(data_temp)rho       -8.49e-07   1.25e-08   -67.8   <2e-16 ***
## as.matrix(data_temp)Mass.utf   3.97e-09   9.29e-12   427.1   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.000502 on 7074 degrees of freedom
## Multiple R-squared: 0.963,Adjusted R-squared: 0.963
## F-statistic: 9.13e+04 on 2 and 7074 DF,  p-value: <2e-16
##
##       R2 Adj_R2     RSS     ESS
## 2 0.9627 0.9627 0.00178 0.04595
```



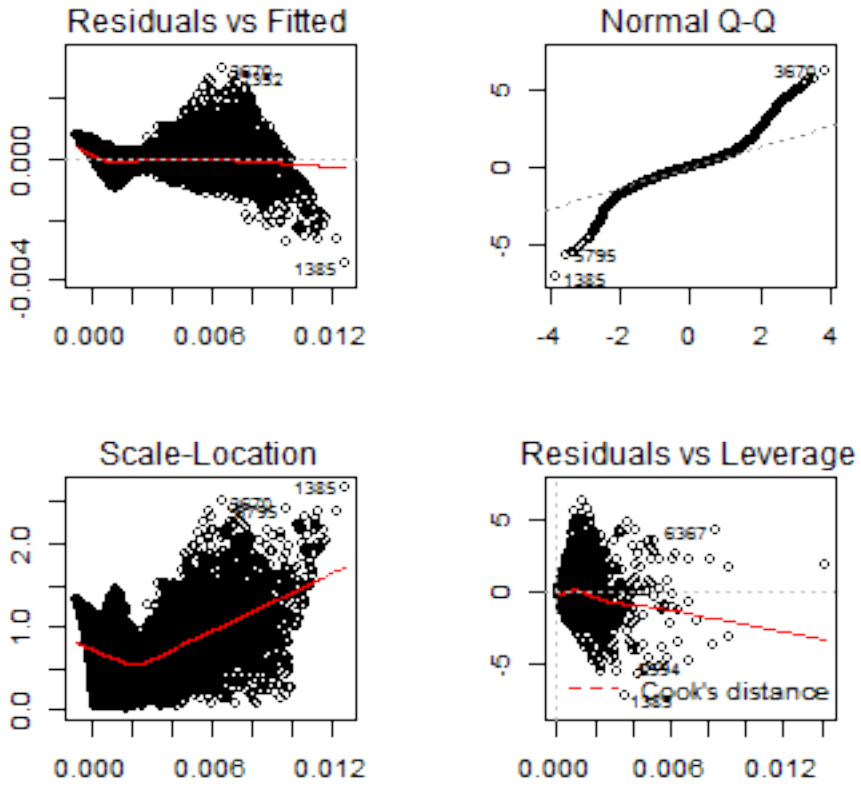

```
## Number of independent variables= 3
## Call:
## lm(formula = data$Risk ~ as.matrix(data_temp))
```

```
##
## Residuals:
##       Min        1Q    Median        3Q       Max
## -0.004025 -0.000242 -0.000014  0.000217  0.002910
##
## Coefficients:
##                                Estimate Std. Error t value Pr(>|t|)
## (Intercept)                    1.54e-03   2.67e-05    57.7   <2e-16 ***
## as.matrix(data_temp)rho       -7.31e-07   1.30e-08   -56.2   <2e-16 ***
## as.matrix(data_temp)Mass.utf   3.48e-09   2.25e-11   154.7   <2e-16 ***
## as.matrix(data_temp)Mass.w     3.73e-07   1.56e-08    24.0   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.000482 on 7073 degrees of freedom
## Multiple R-squared: 0.966,Adjusted R-squared: 0.966
## F-statistic: 6.6e+04 on 3 and 7073 DF,  p-value: <2e-16
##
##       R2 Adj_R2      RSS     ESS
## 5 0.9655 0.9655 0.001646 0.04608
```



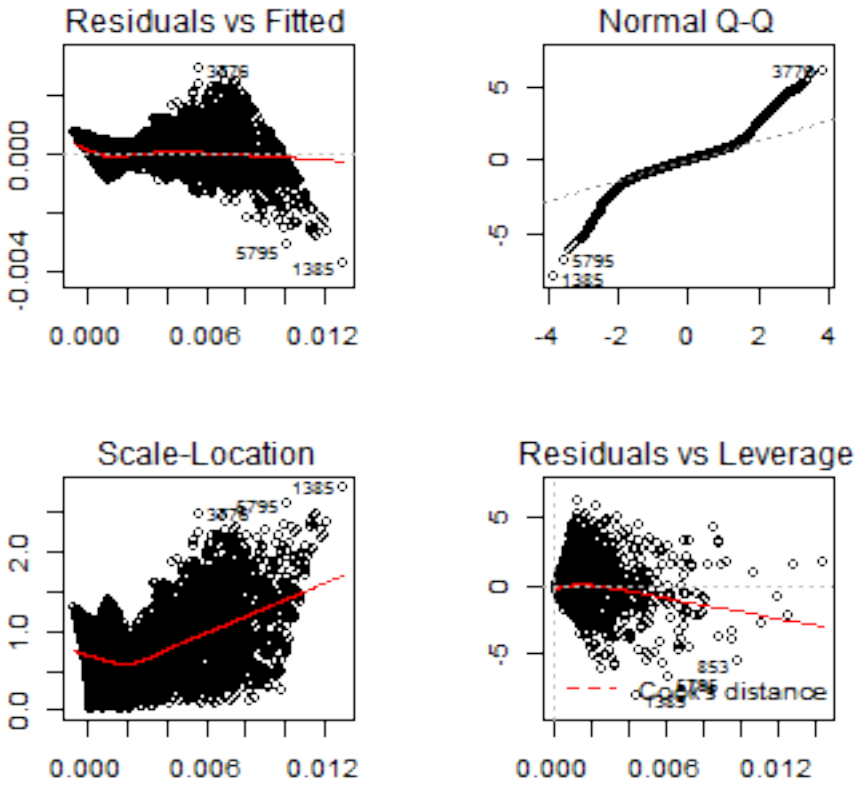

```
## Number of independent variables= 4
## Call:
## lm(formula = data$Risk ~ as.matrix(data_temp))
##
## Residuals:
```

```
##       Min        1Q    Median        3Q       Max
## -0.003397 -0.000235 -0.000010  0.000200  0.002975
##
## Coefficients:
##                               Estimate Std. Error t value Pr(>|t|)
## (Intercept)                   1.99e-03   2.73e-05    73.1   <2e-16 ***
## as.matrix(data_temp)rho      -7.79e-07   1.21e-08   -64.2   <2e-16 ***
## as.matrix(data_temp)Mass.f    4.30e-10   1.72e-11    25.0   <2e-16 ***
## as.matrix(data_temp)Mass.utf  3.73e-09   1.31e-11   284.2   <2e-16 ***
## as.matrix(data_temp)ach      -2.25e-04   8.83e-06   -25.4   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.000472 on 7072 degrees of freedom
## Multiple R-squared: 0.967,Adjusted R-squared: 0.967
## F-statistic: 5.17e+04 on 4 and 7072 DF,  p-value: <2e-16
##
##       R2 Adj_R2      RSS     ESS
## 2 0.9669 0.9669 0.001578 0.04615
```



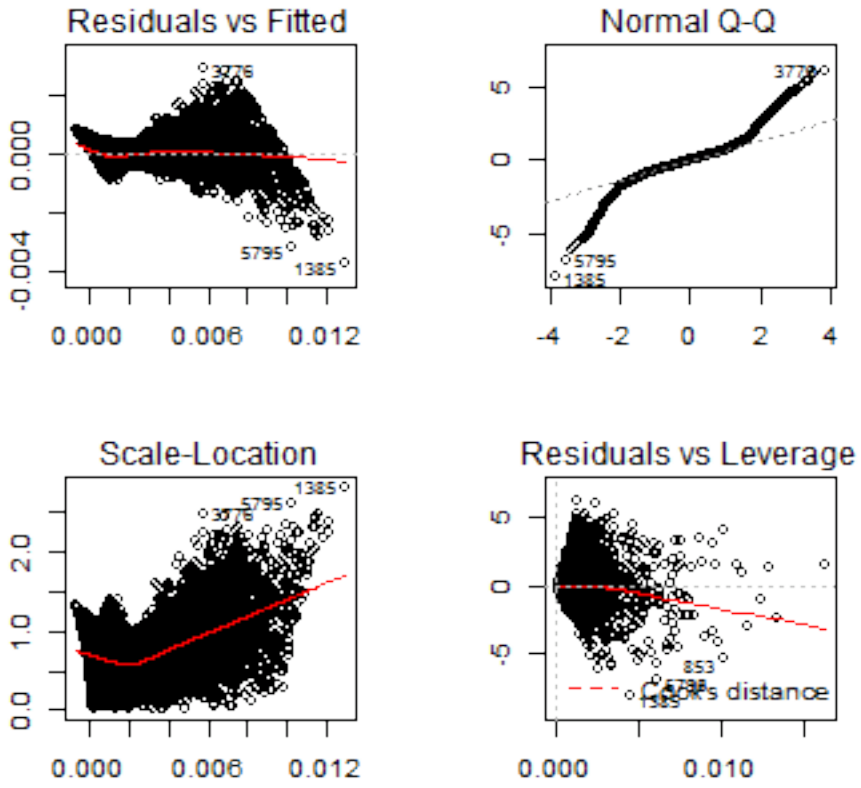

```
## Number of independent variables= 5
## Call:
## lm(formula = data$Risk ~ as.matrix(data_temp))
##
## Residuals:
##       Min        1Q    Median        3Q       Max
```

```
## -0.003661 -0.000231 -0.000009  0.000201  0.002839
##
## Coefficients:
##                               Estimate Std. Error t value Pr(>|t|)
## (Intercept)                   1.77e-03   2.88e-05    61.3   <2e-16 ***
## as.matrix(data_temp)rho      -6.93e-07   1.26e-08   -55.0   <2e-16 ***
## as.matrix(data_temp)Mass.f    3.79e-10   1.69e-11    22.4   <2e-16 ***
## as.matrix(data_temp)Mass.utf  3.36e-09   2.25e-11   149.2   <2e-16 ***
## as.matrix(data_temp)Mass.w    2.98e-07   1.51e-08    19.7   <2e-16 ***
## as.matrix(data_temp)ach      -1.96e-04   8.72e-06   -22.5   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.00046 on 7071 degrees of freedom
## Multiple R-squared: 0.969,Adjusted R-squared: 0.969
## F-statistic: 4.37e+04 on 5 and 7071 DF,  p-value: <2e-16
##
##       R2 Adj_R2      RSS     ESS
## 1 0.9687 0.9686 0.001496 0.04623
```




```
## Number of independent variables= 6
## Call:
## lm(formula = data$Risk ~ as.matrix(data_temp))
##
## Residuals:
##       Min        1Q    Median        3Q       Max
```

```
## -0.003654 -0.000231 -0.000009  0.000201  0.002817
##
## Coefficients:
##                               Estimate Std. Error t value Pr(>|t|)
## (Intercept)                   1.84e-03   3.18e-05   57.88  < 2e-16 ***
## as.matrix(data_temp)rho      -6.84e-07   1.27e-08  -54.01  < 2e-16 ***
## as.matrix(data_temp)Mass.f    4.33e-10   1.96e-11   22.13  < 2e-16 ***
## as.matrix(data_temp)Mass.utf  3.33e-09   2.33e-11  143.17  < 2e-16 ***
## as.matrix(data_temp)Mass.w    2.99e-07   1.51e-08   19.84  < 2e-16 ***
## as.matrix(data_temp)ach      -2.08e-04   8.98e-06  -23.21  < 2e-16 ***
## as.matrix(data_temp)p        -1.44e-04   2.65e-05   -5.44  5.7e-08 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.000459 on 7070 degrees of freedom
## Multiple R-squared: 0.969,Adjusted R-squared: 0.969
## F-statistic: 3.66e+04 on 6 and 7070 DF,  p-value: <2e-16
##
##       R2 Adj_R2     RSS     ESS
## 1 0.9688 0.9688 0.00149 0.04624
```



ggplot