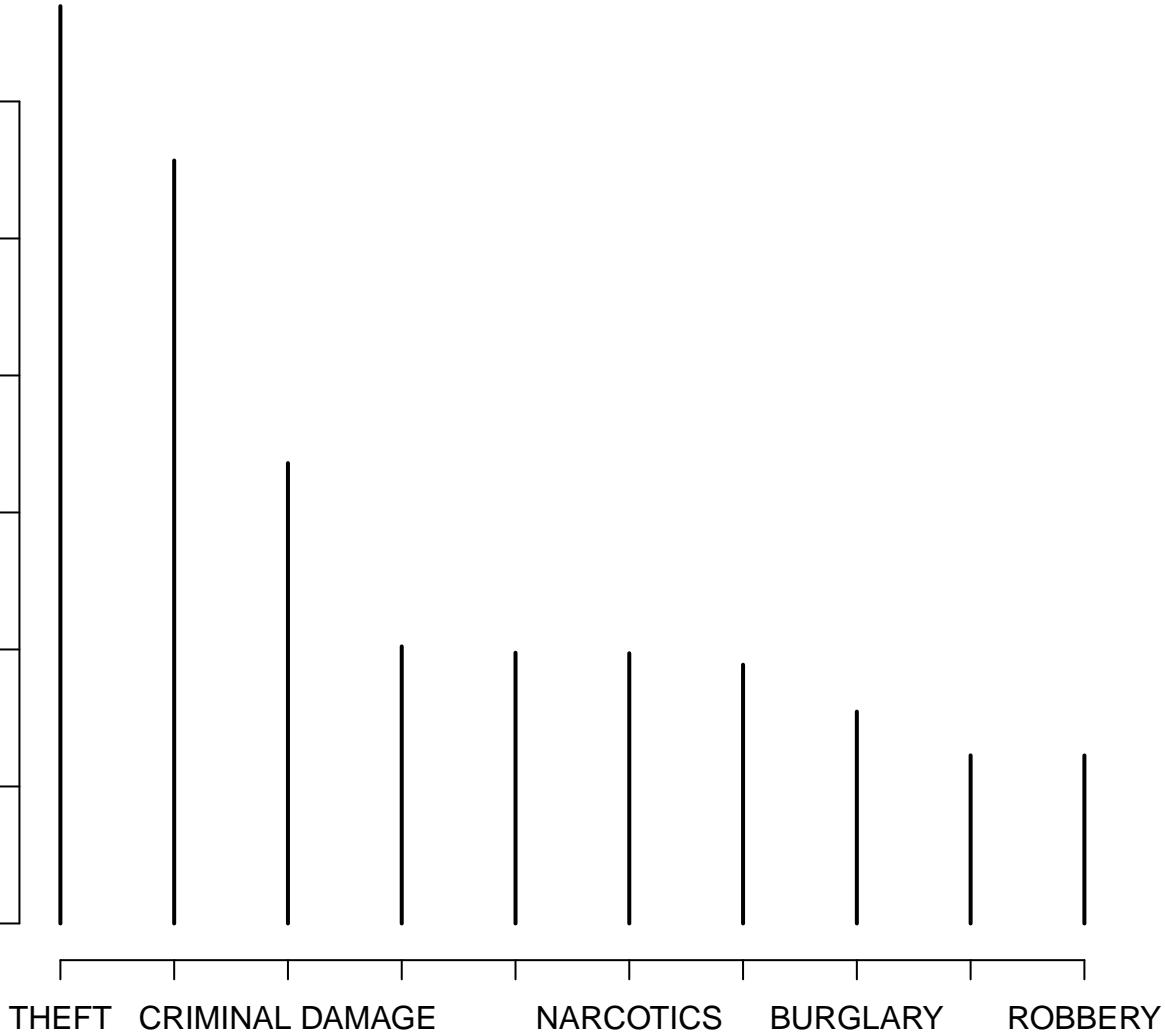
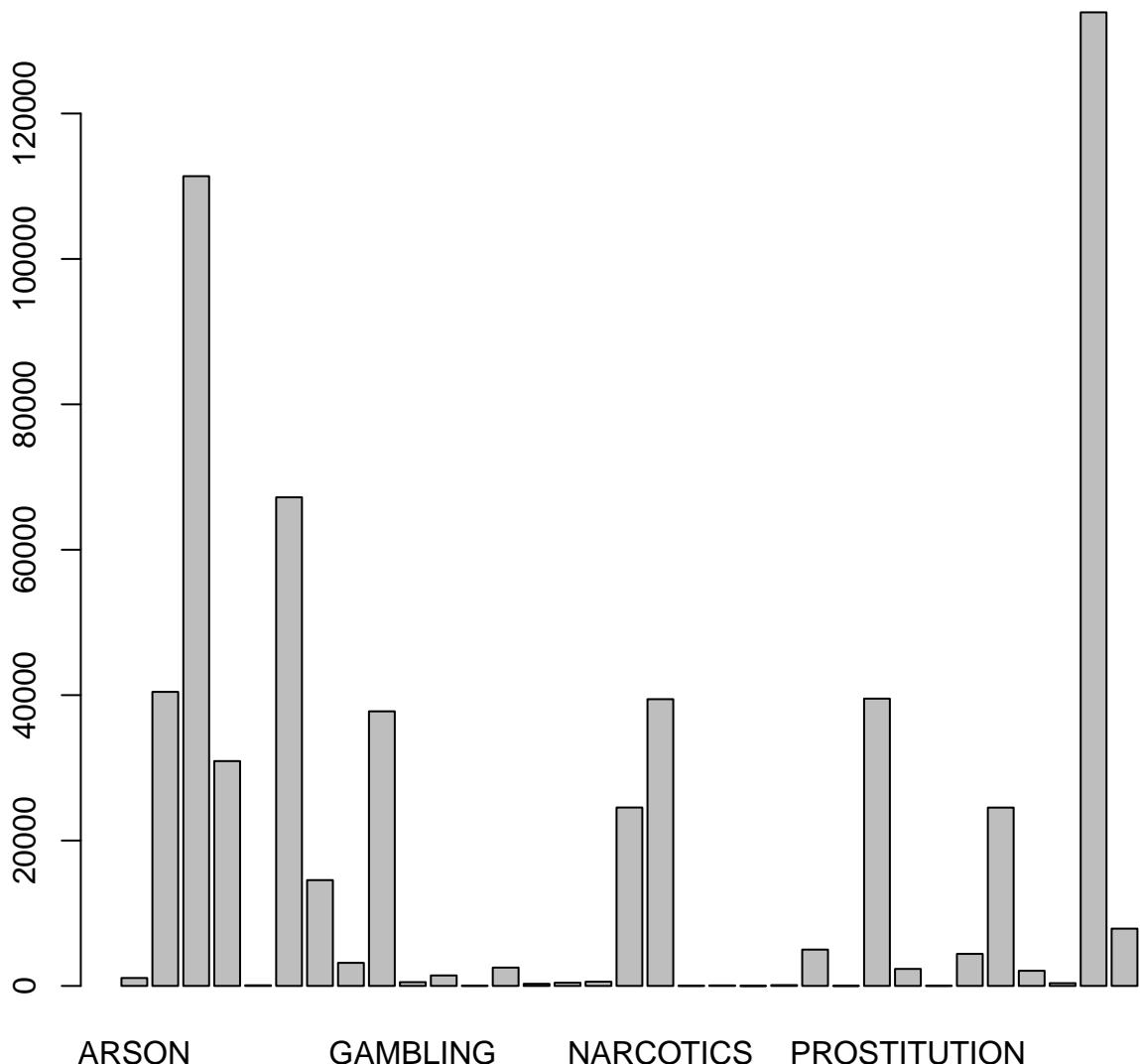


head(sort(table(crime.data\$Primary.Type), decreasing = TRUE),

10)

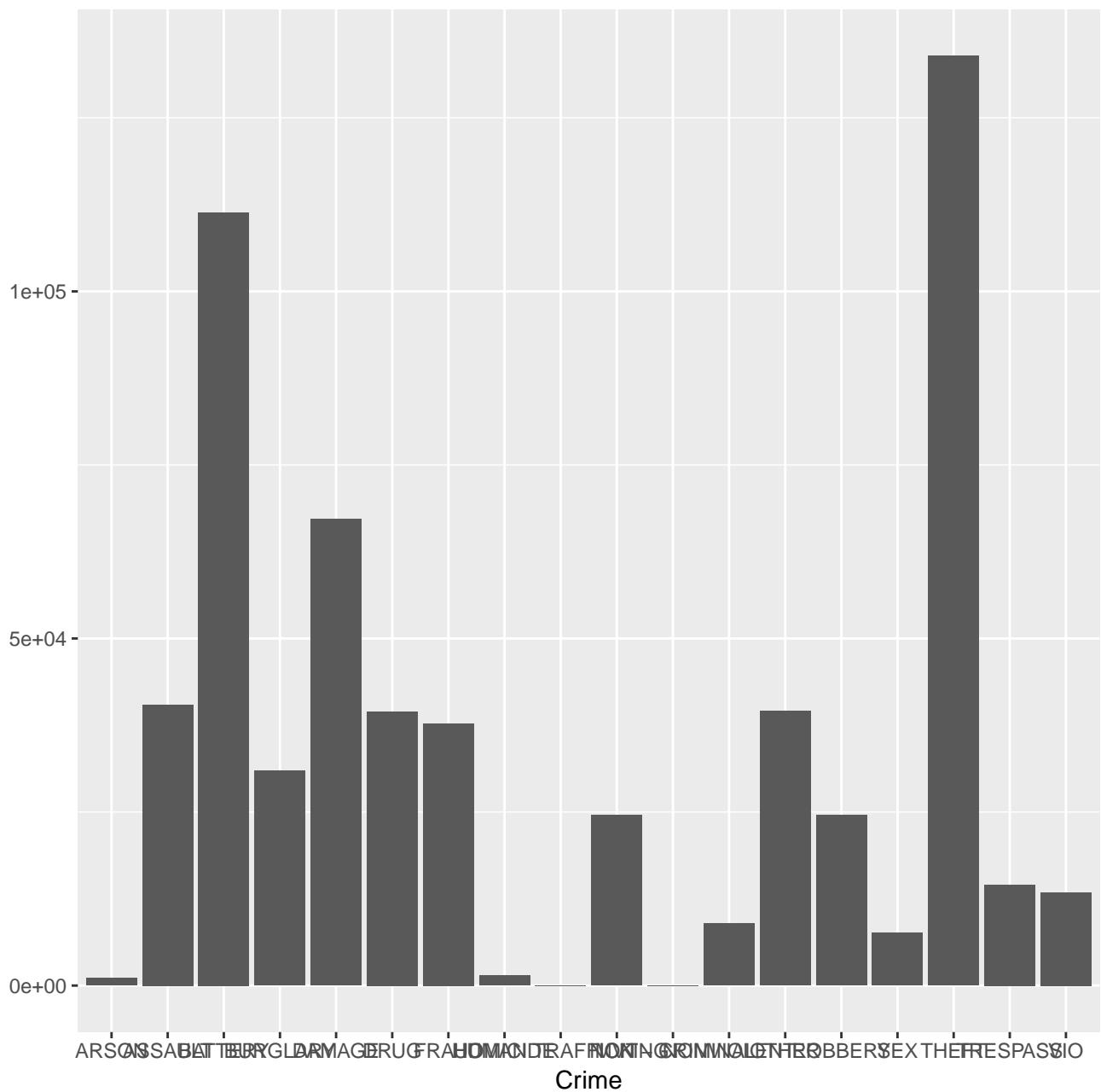
100000  
80000  
60000  
40000  
20000  
0



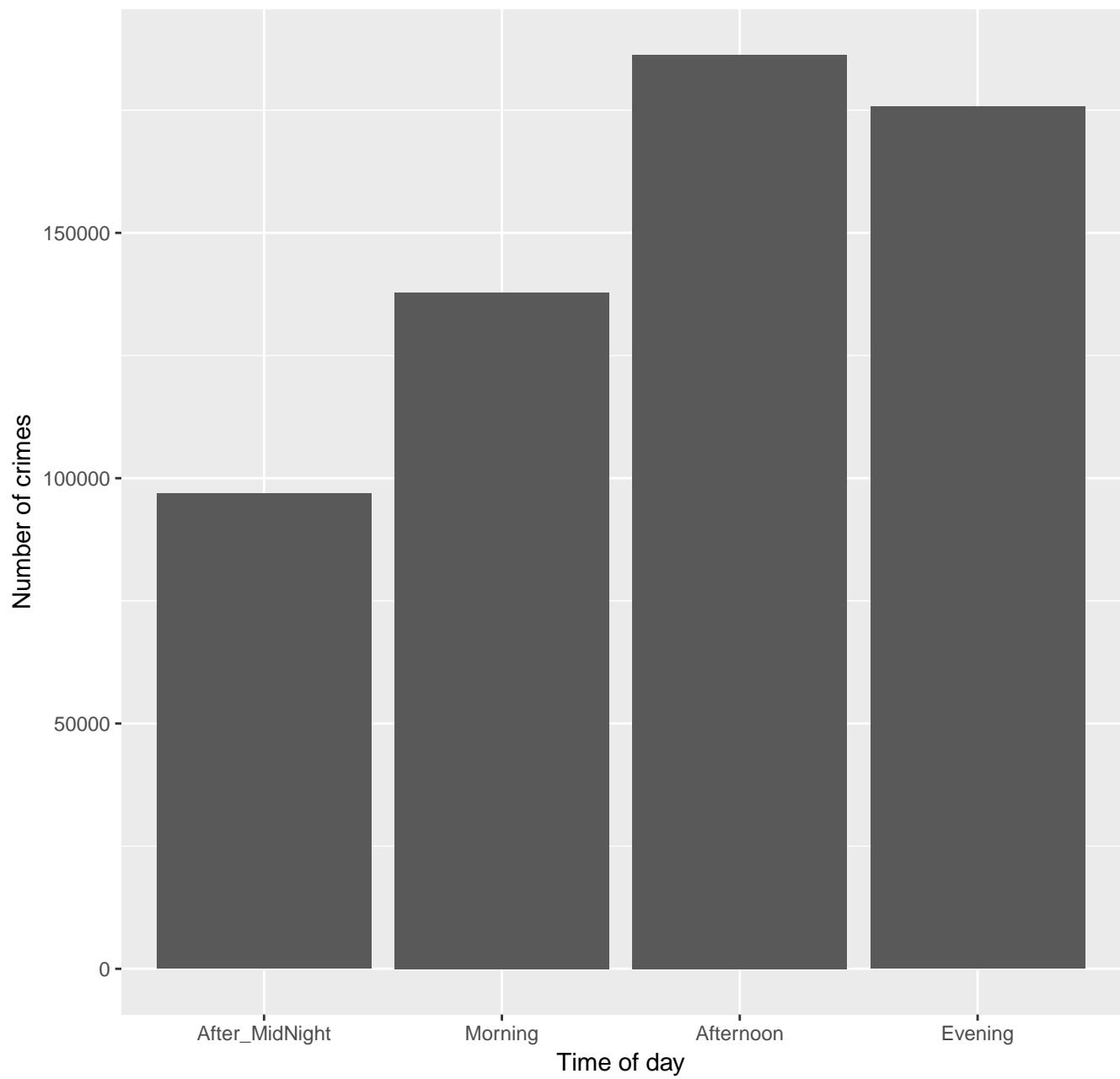


# Crimes in Chicago

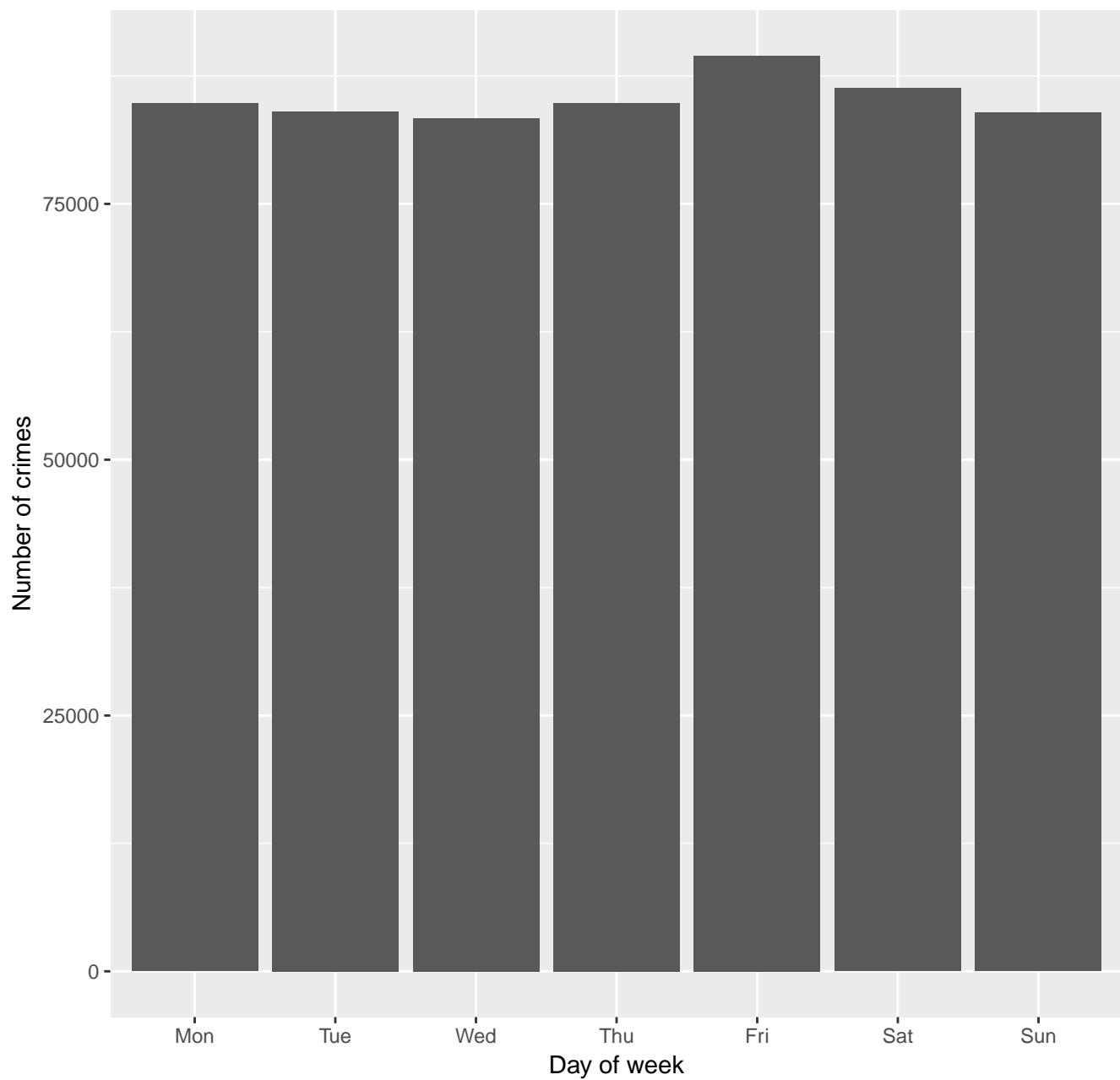
Number of crimes



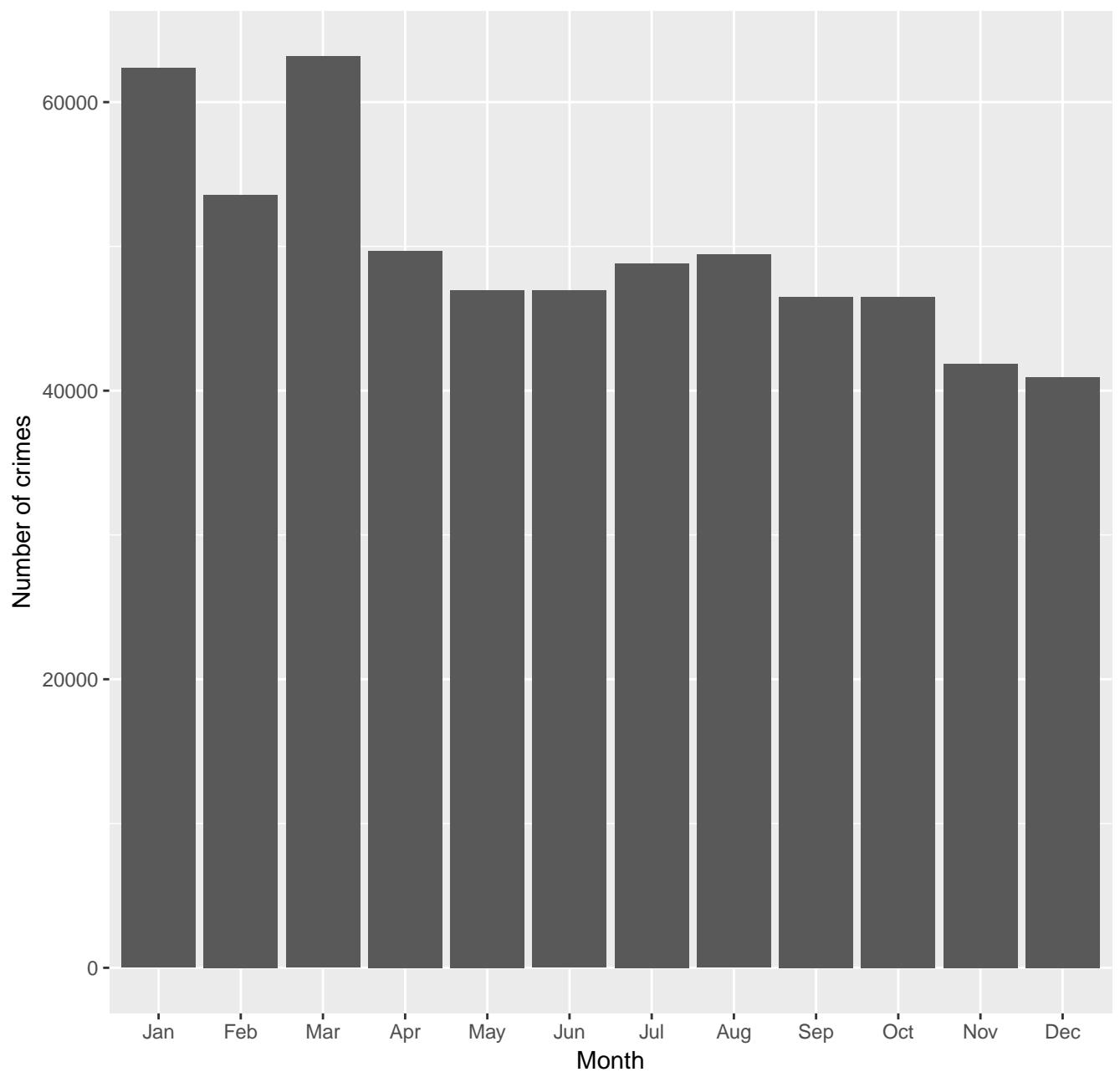
## Crimes by time of day



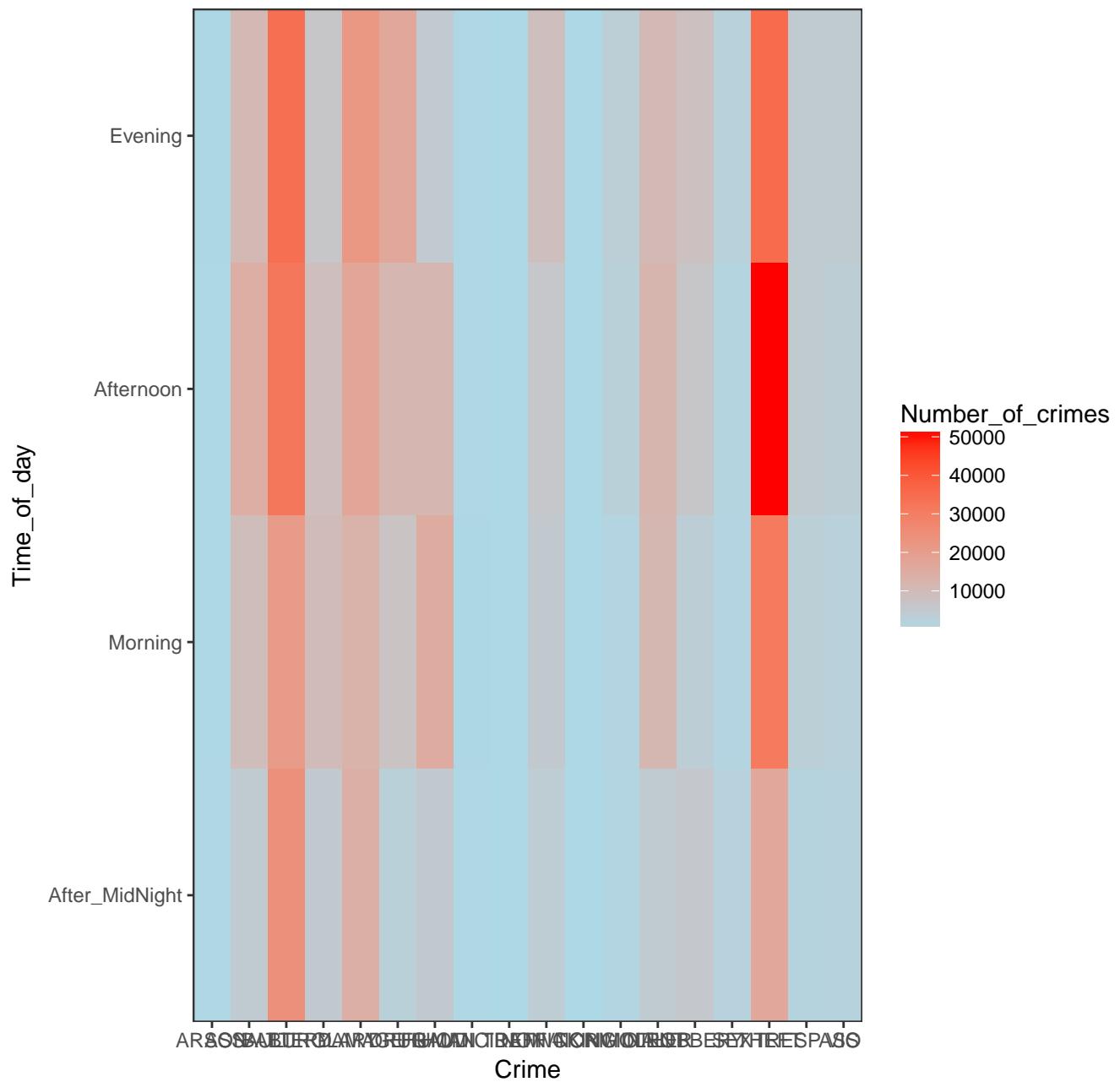
## Crimes by day of week



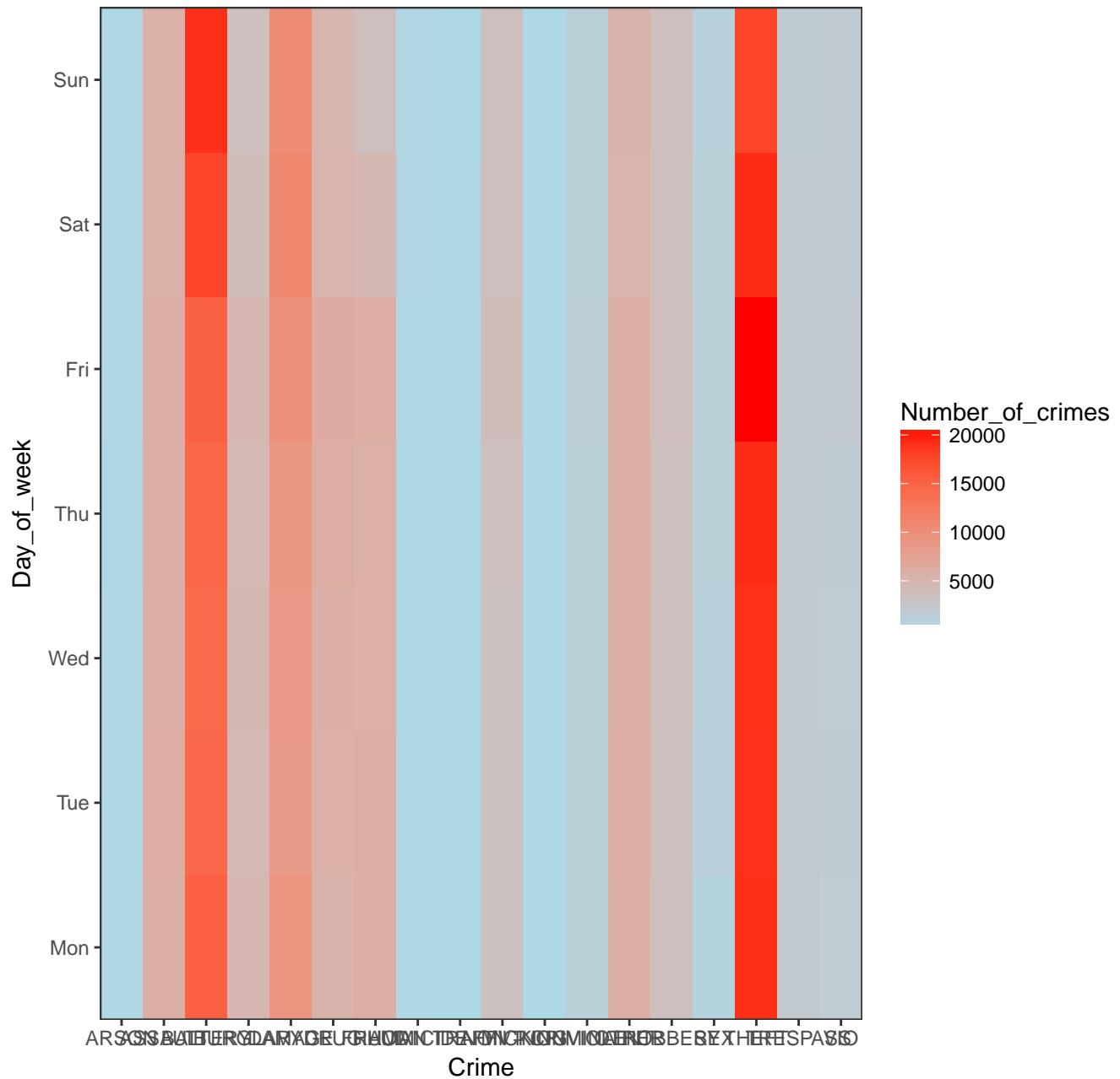
# Crimes by month



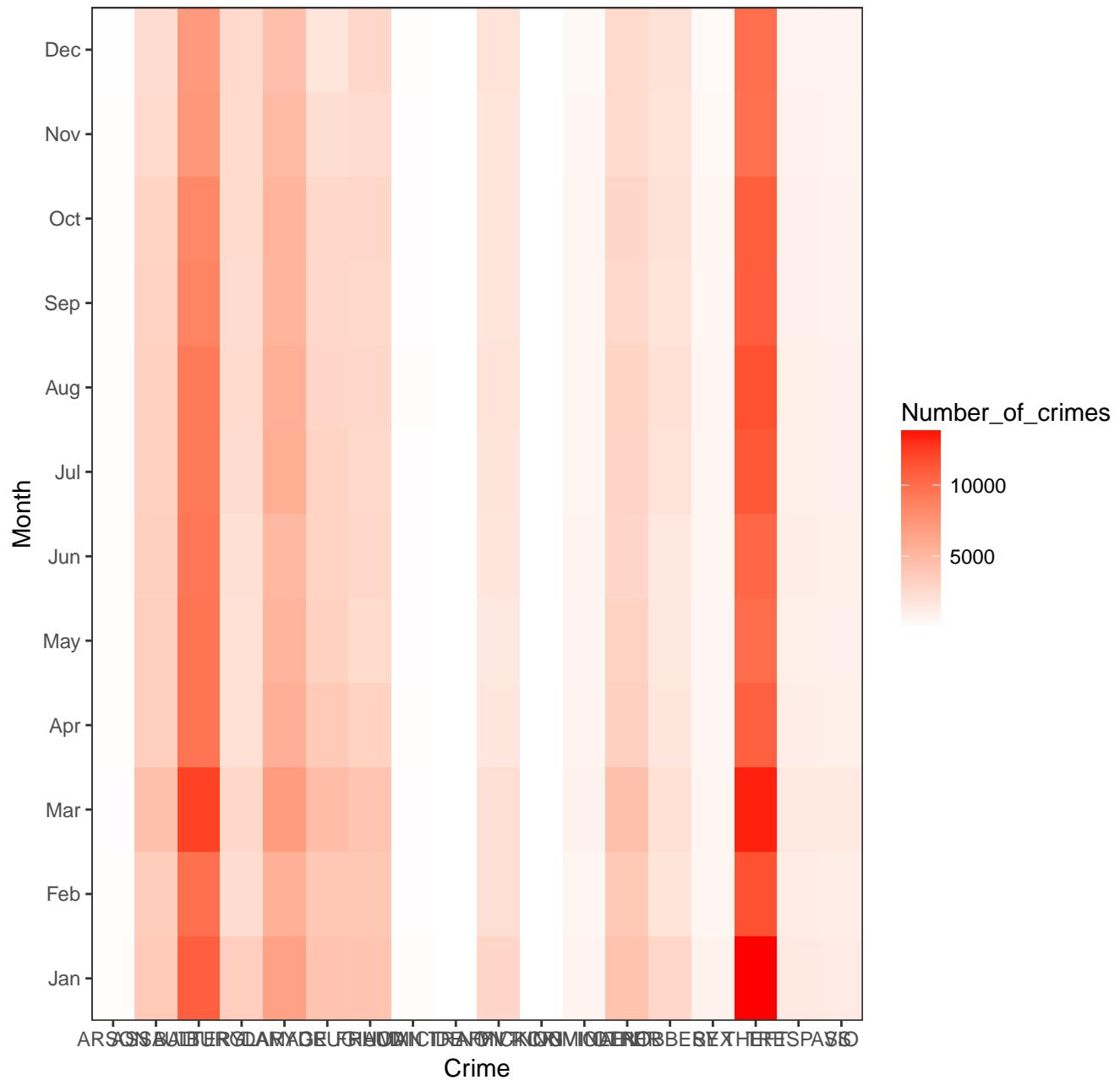
# Crimes\_by\_time\_of\_day



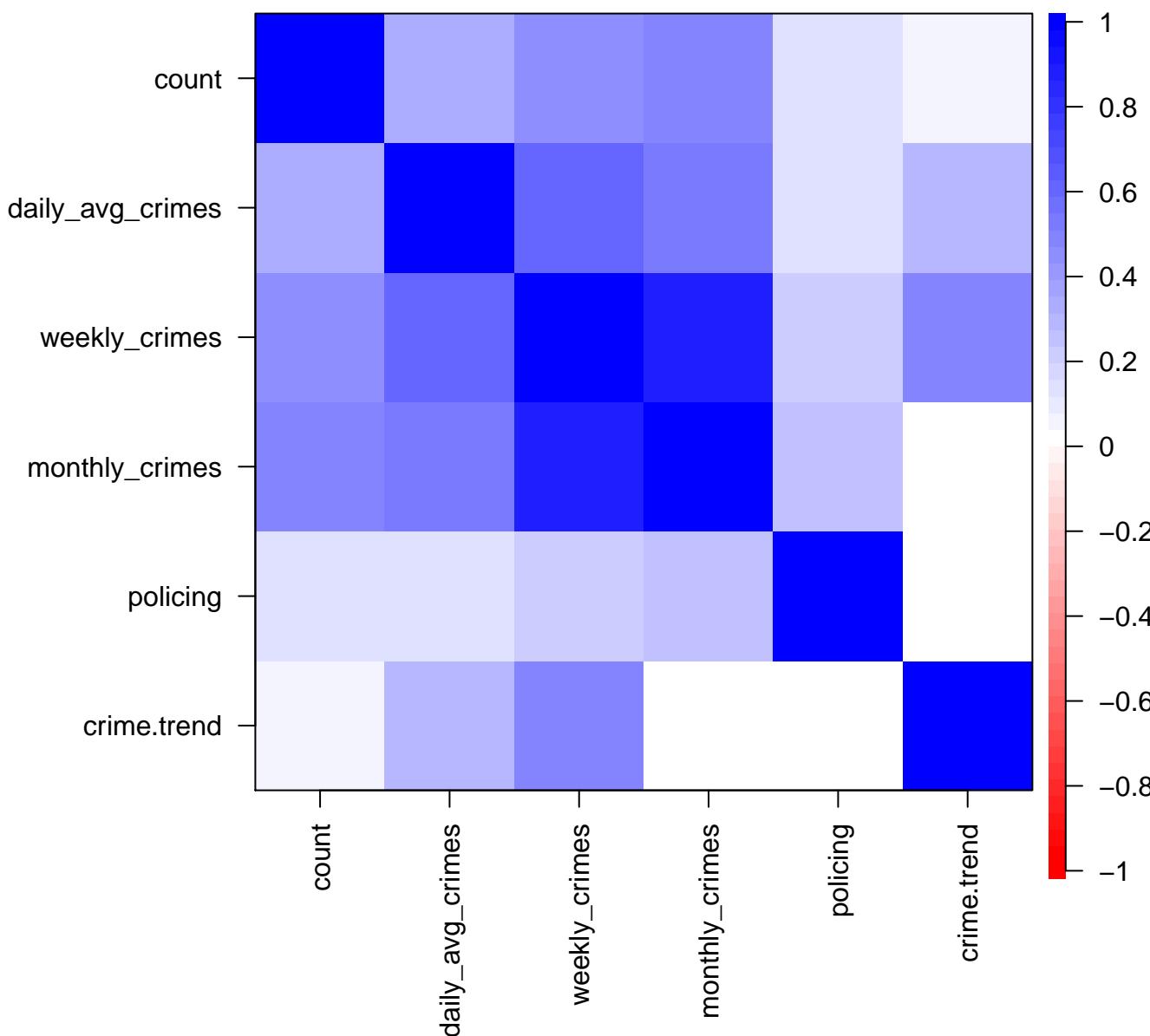
# Crimes\_by\_day\_of\_week



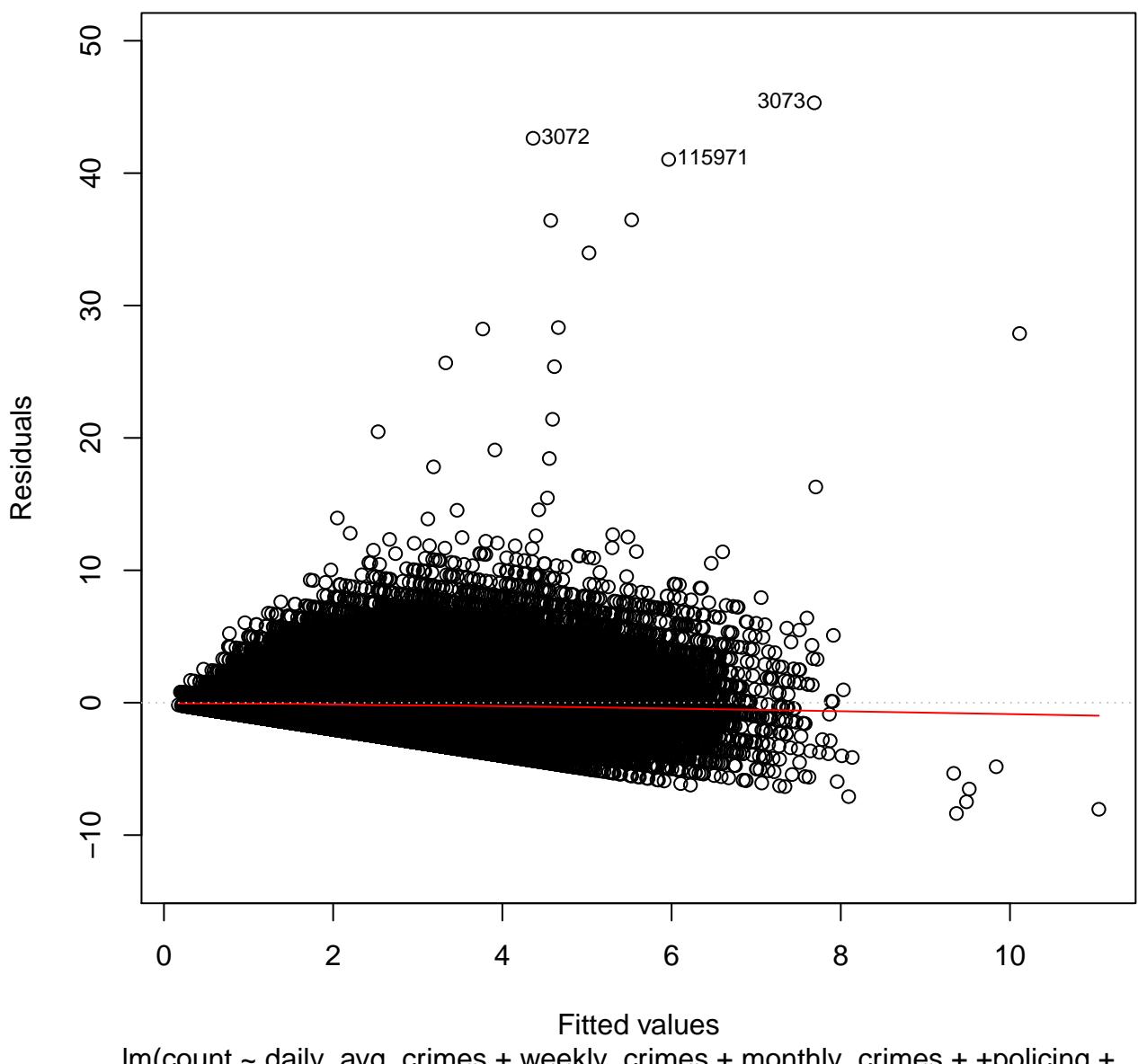
## Crimes\_by\_Month



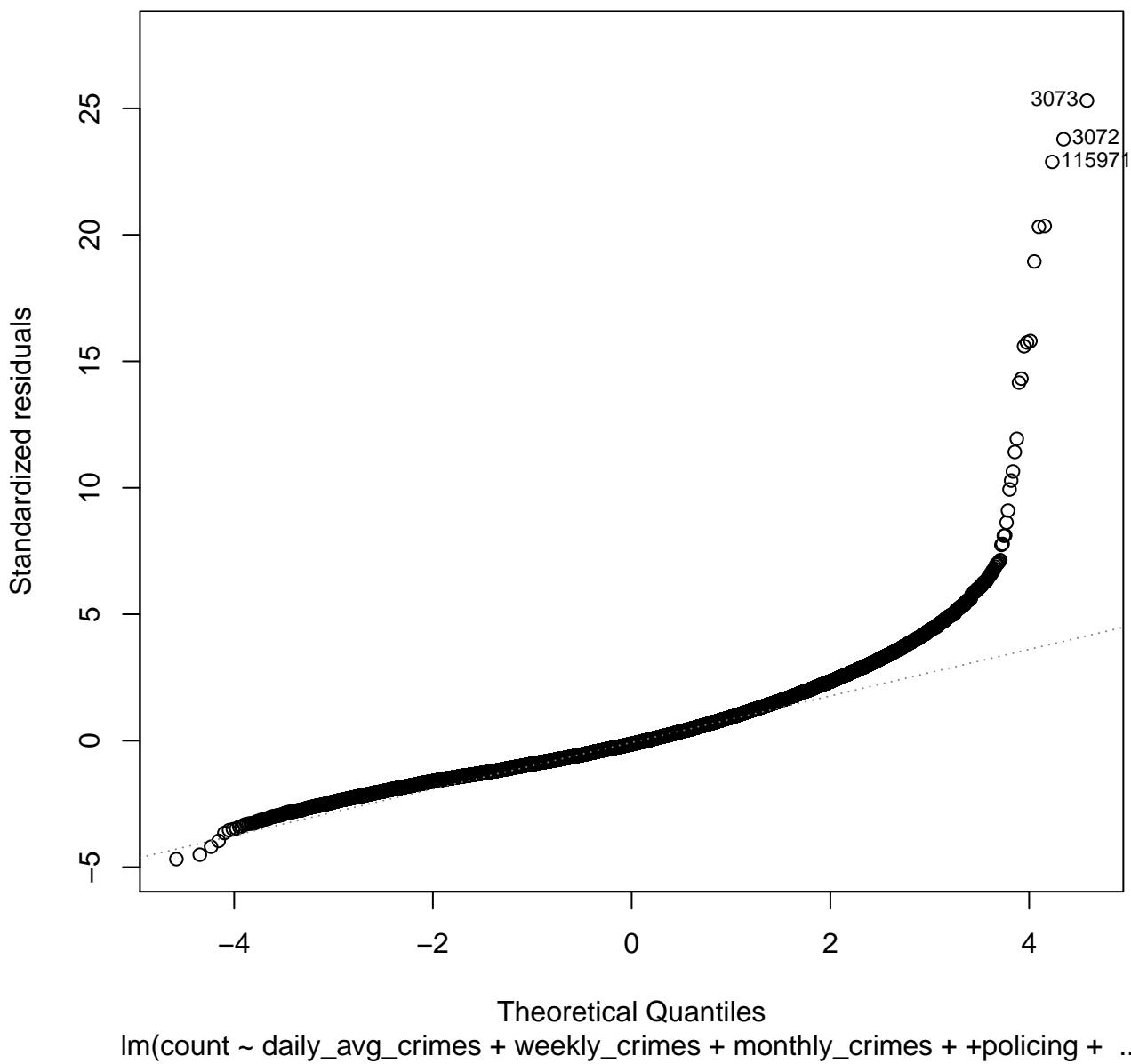
## Correlation plot



### Residuals vs Fitted

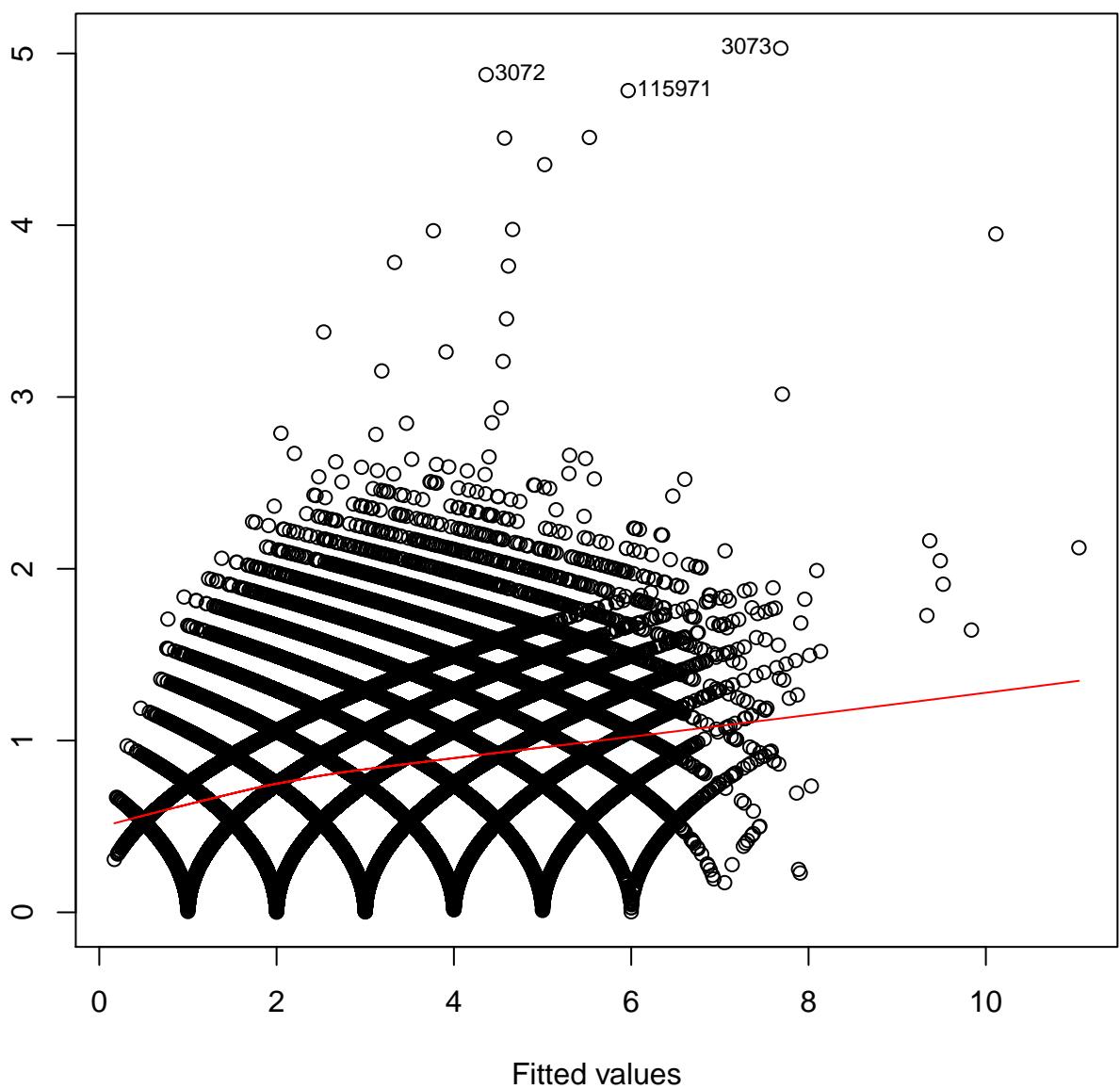


Normal Q–Q

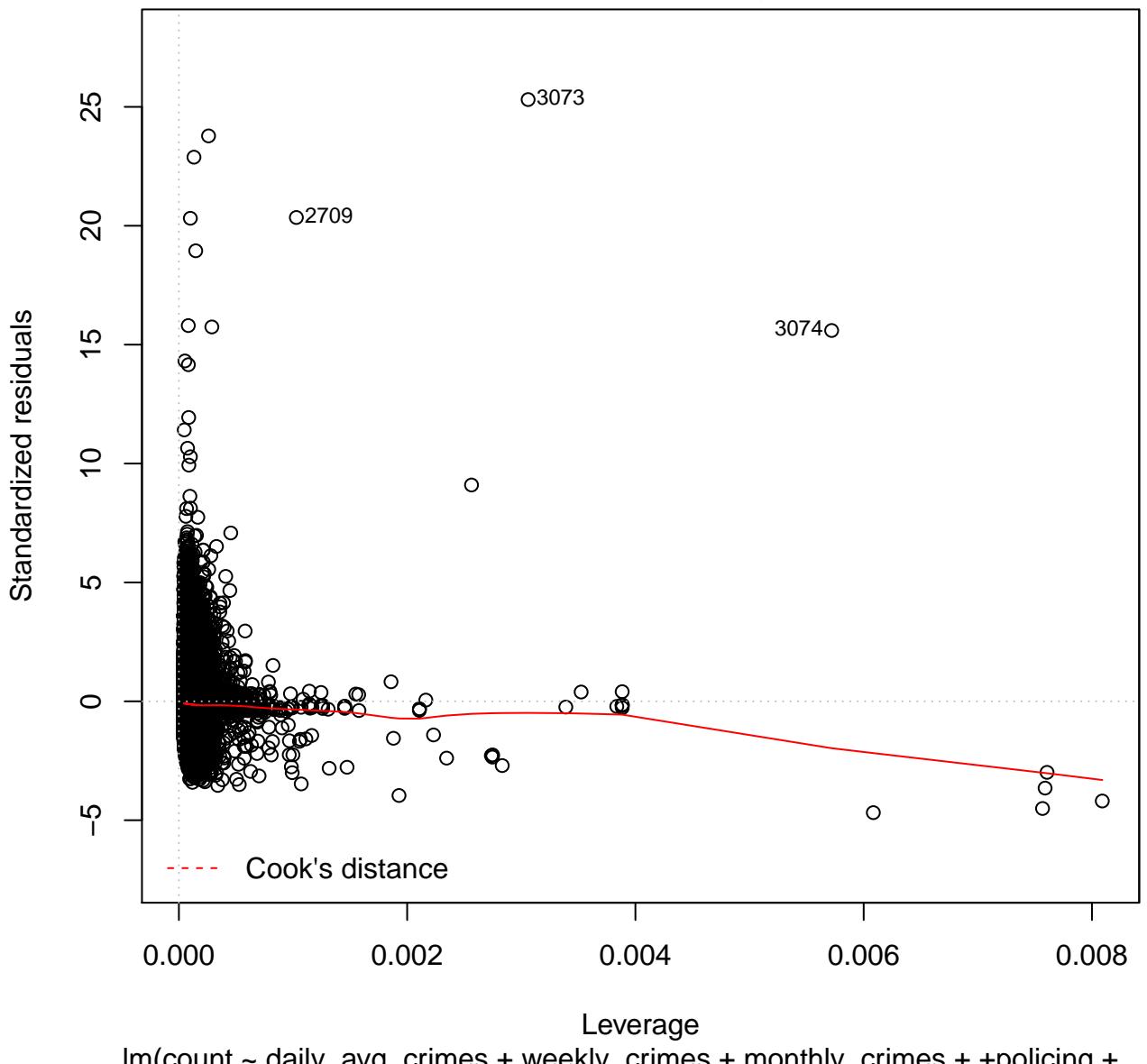


### Scale–Location

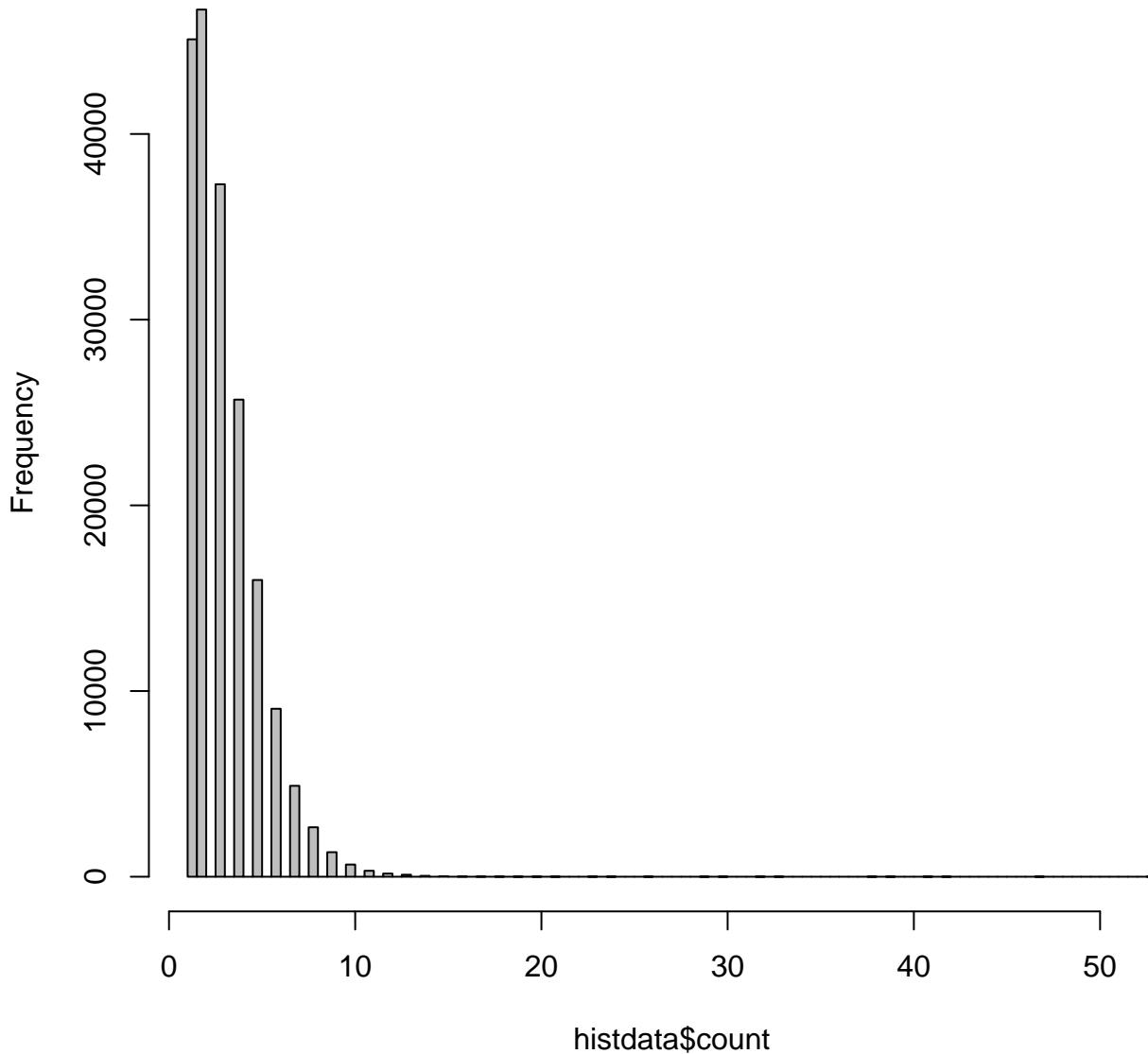
$\sqrt{\text{Standardized residuals}}$



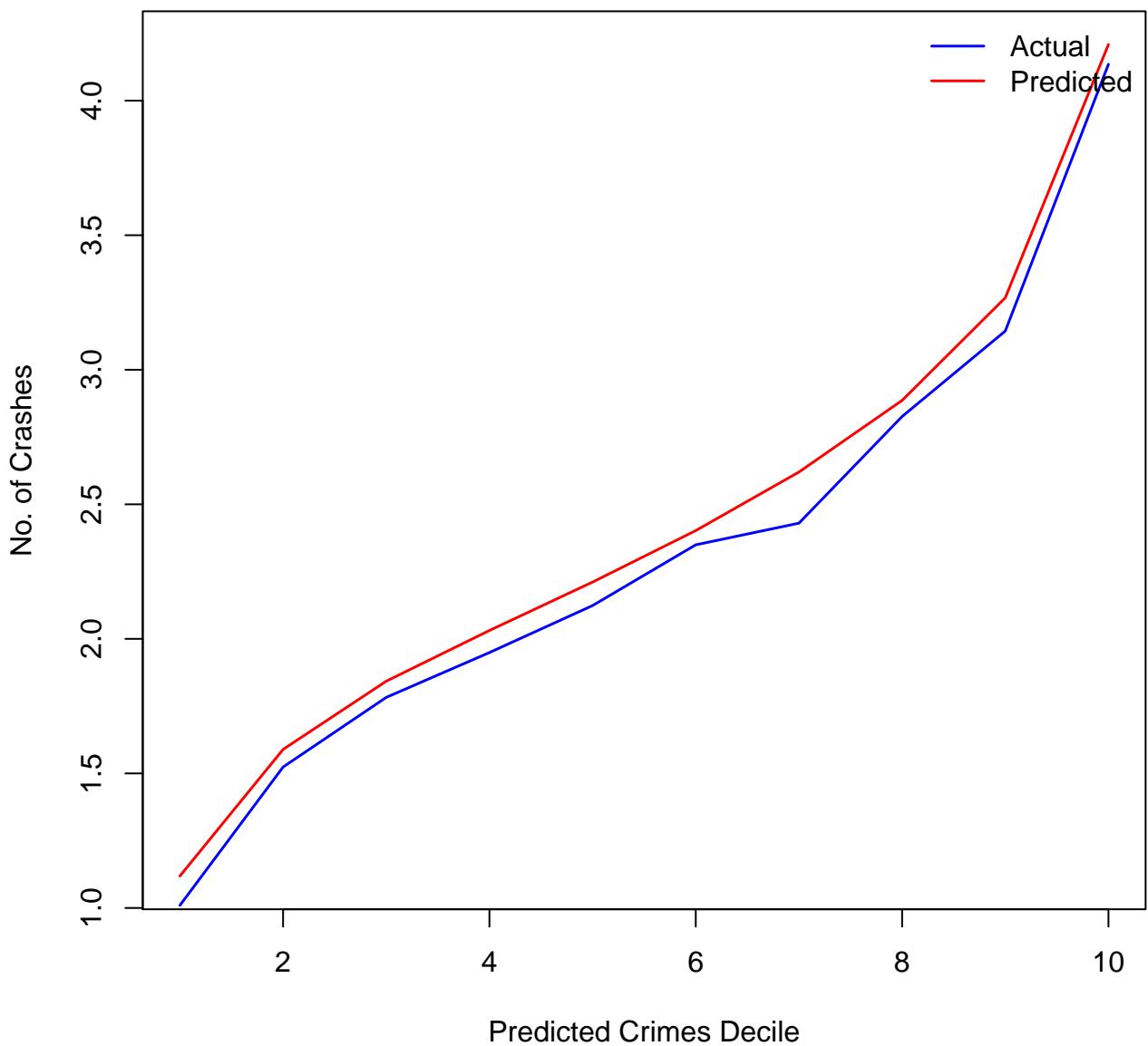
### Residuals vs Leverage



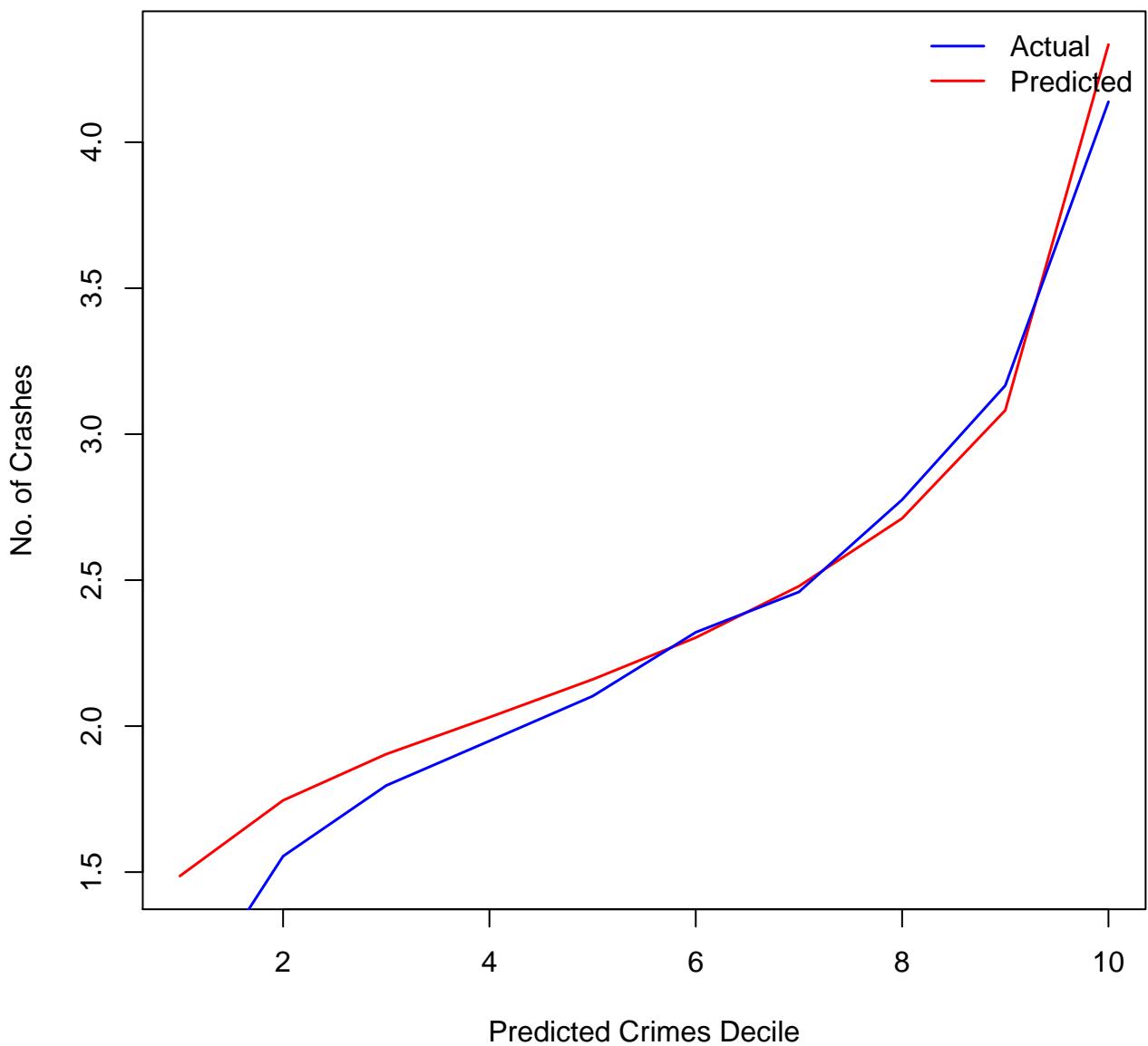
### Histogram of histdata\$count



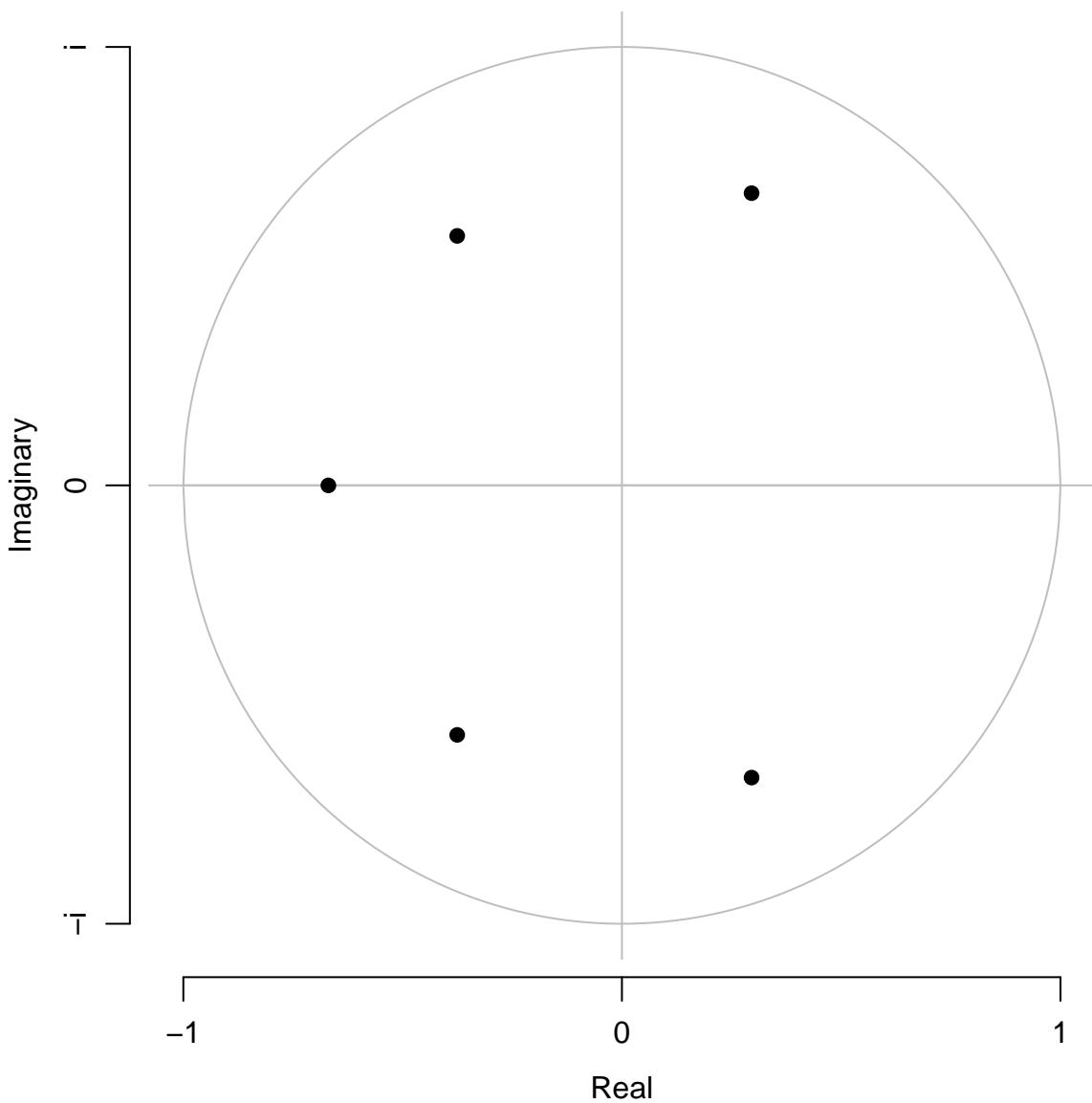
## Actual vs. Predicted



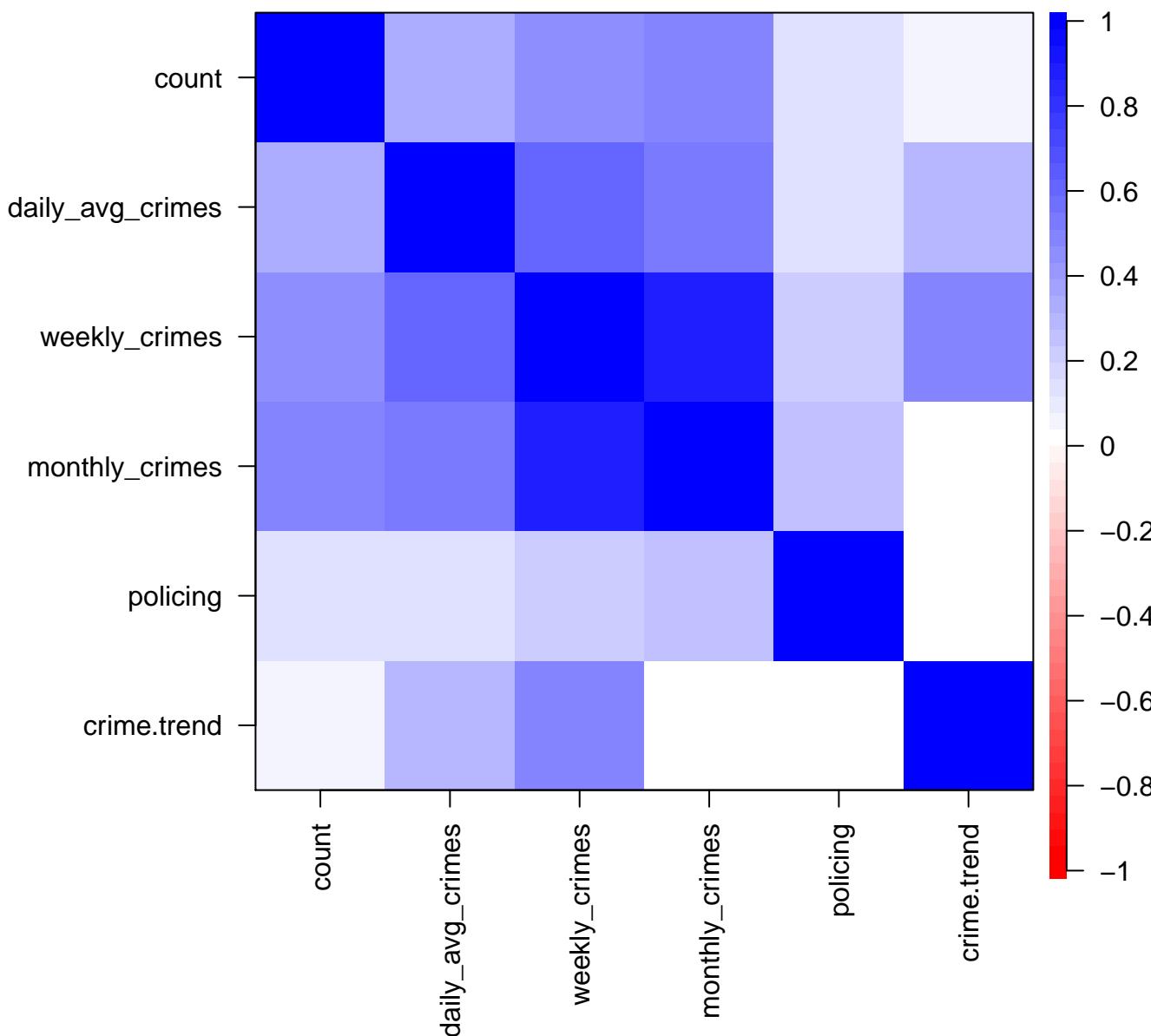
## Actual vs. Predicted



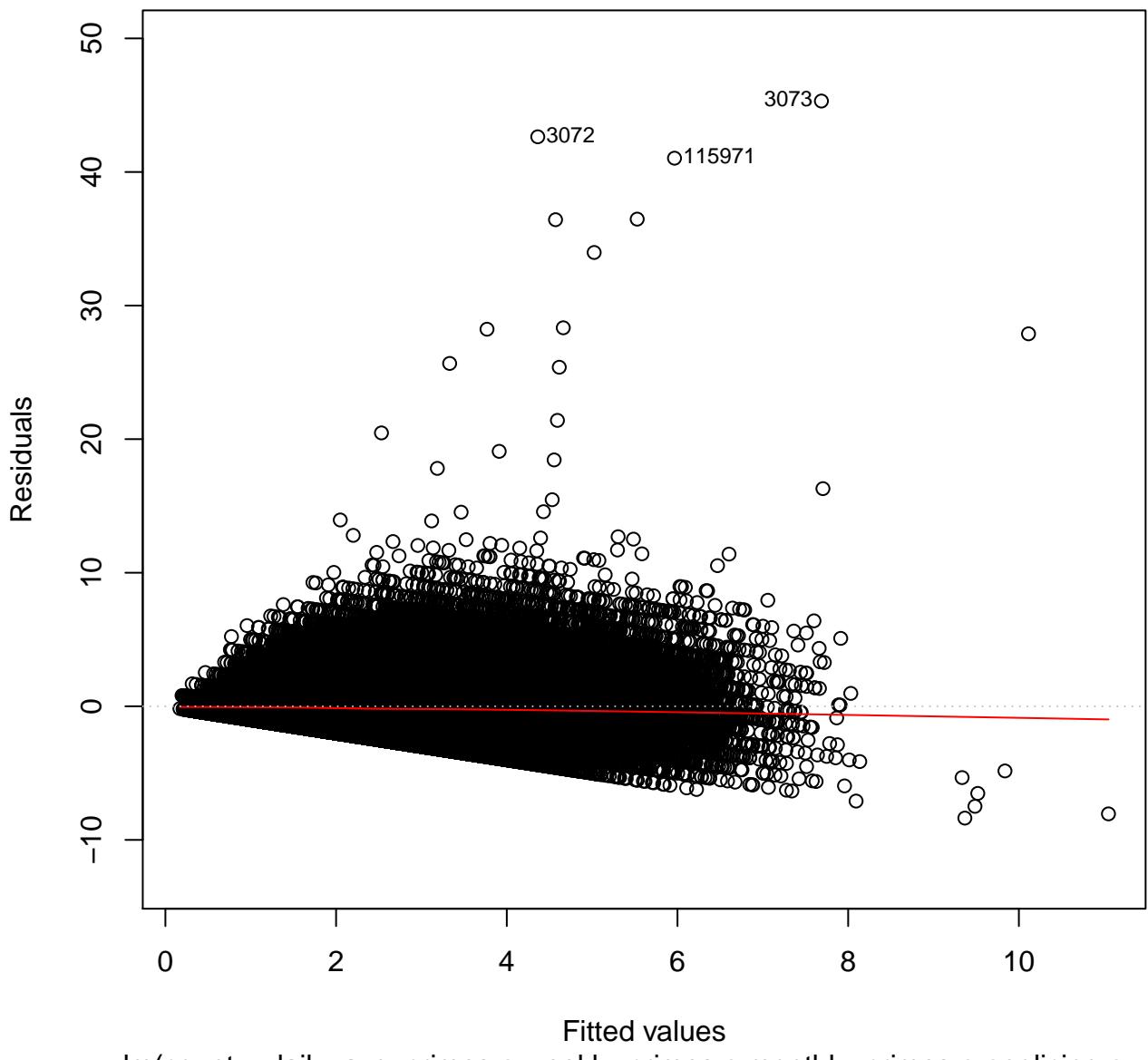
## Inverse AR roots



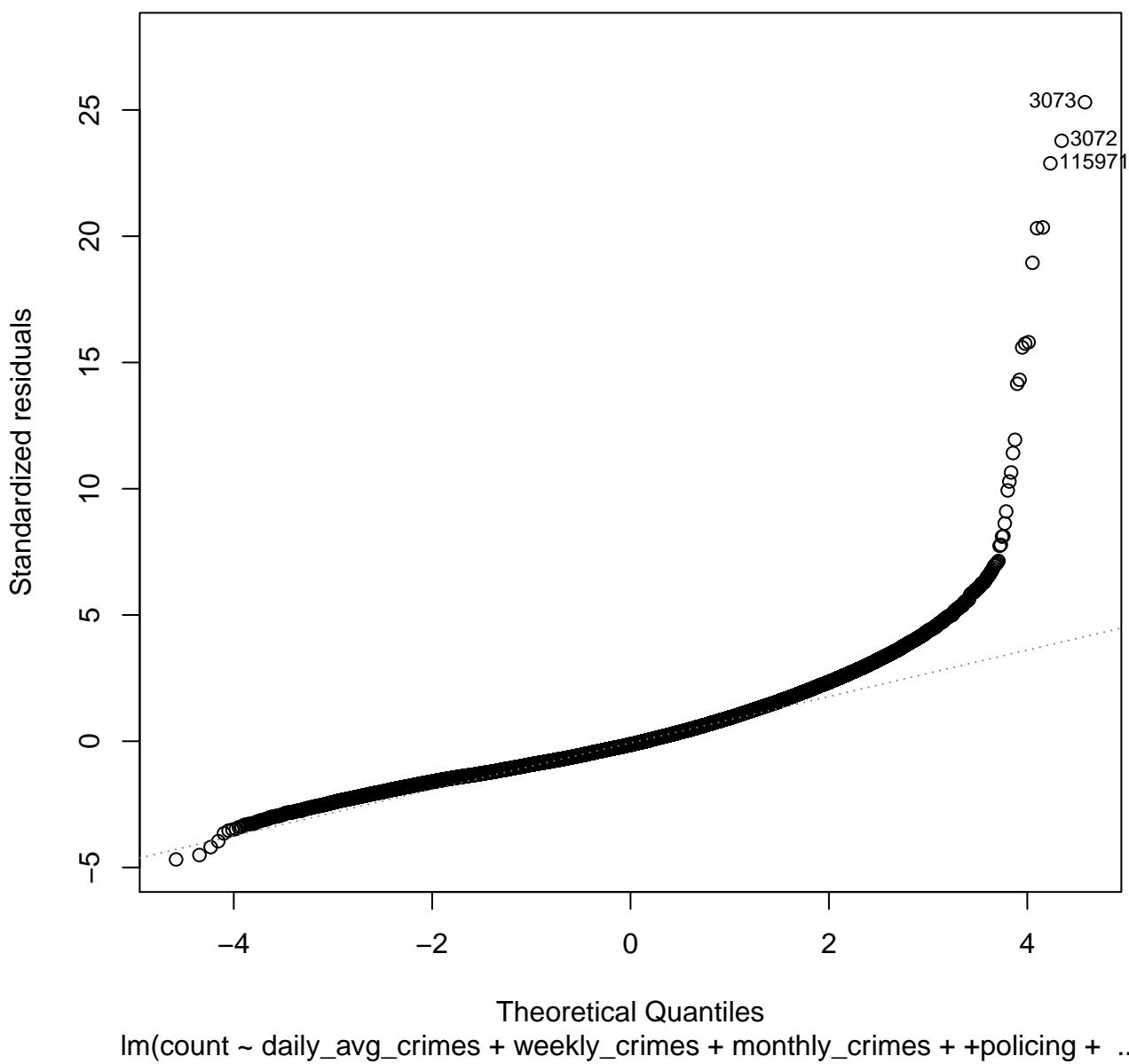
## Correlation plot



### Residuals vs Fitted

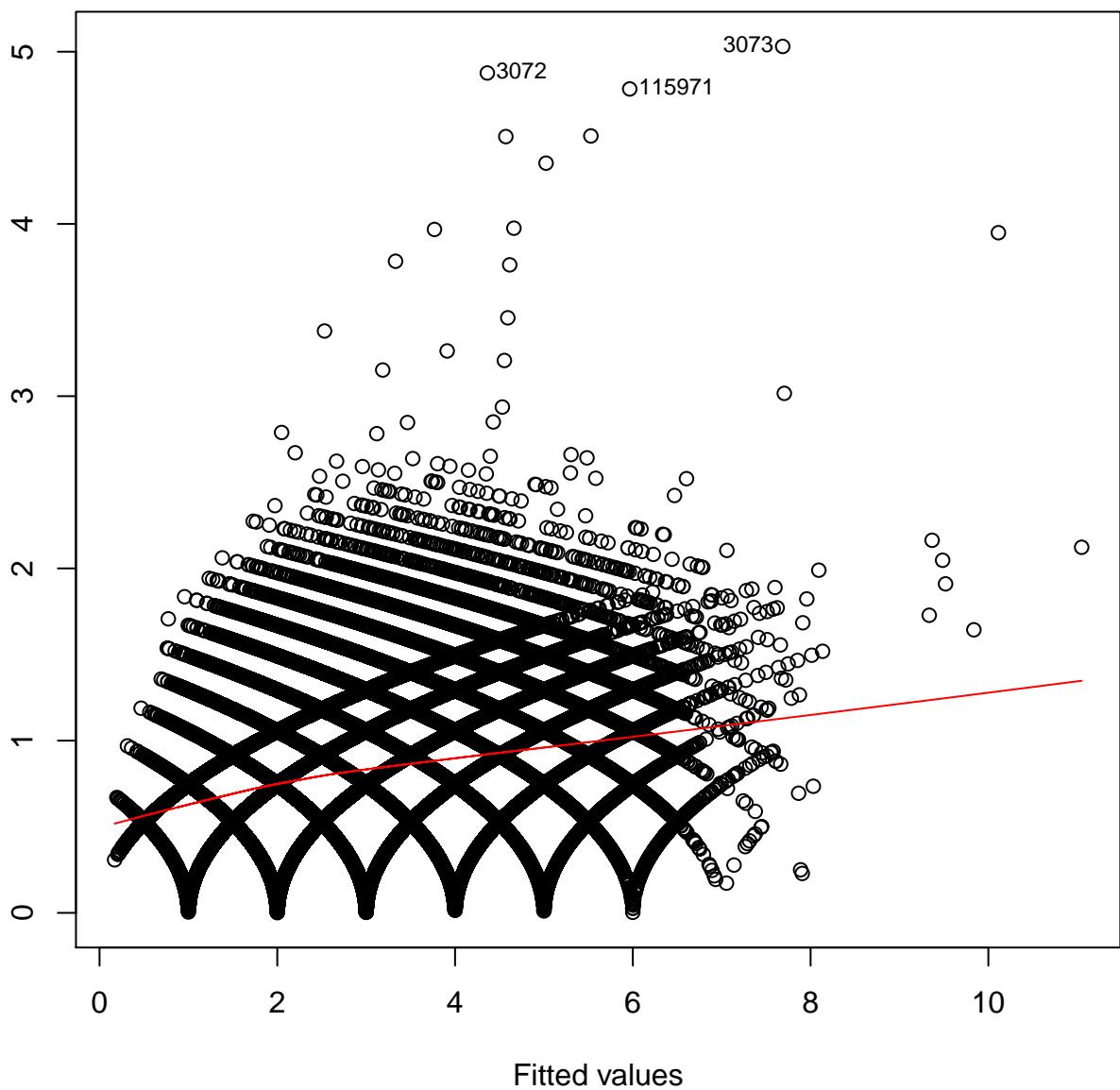


Normal Q–Q

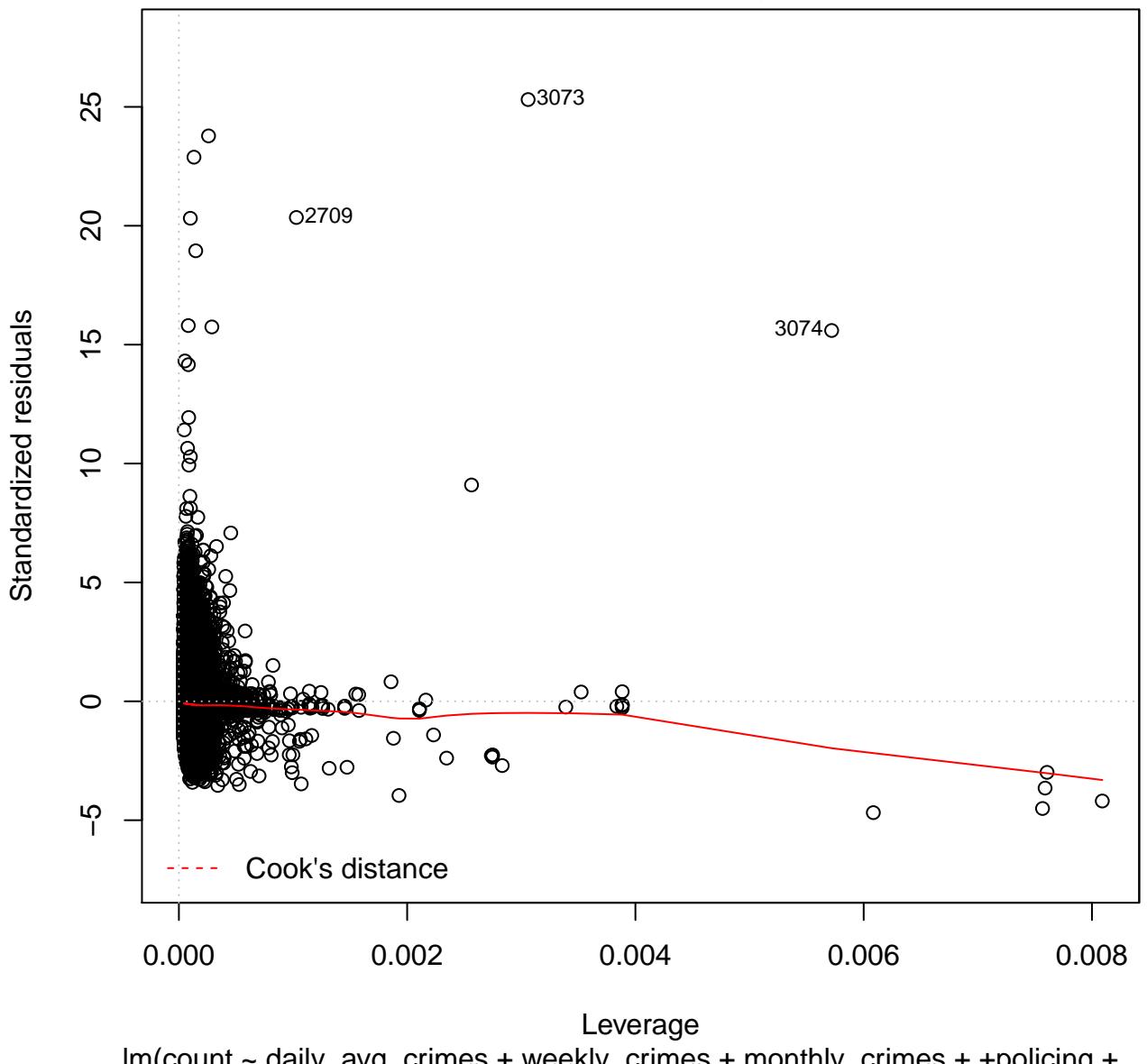


### Scale–Location

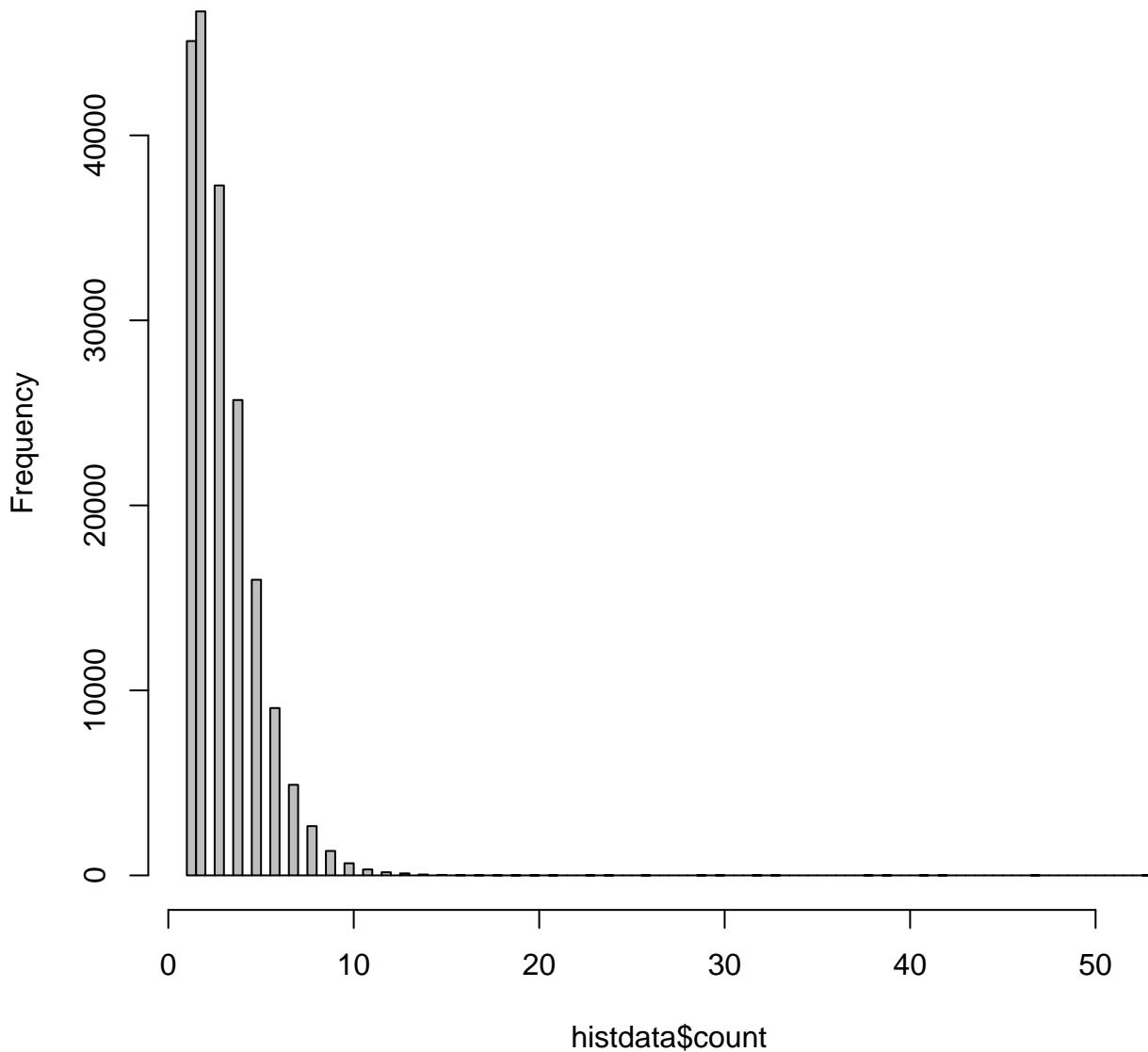
$\sqrt{\text{Standardized residuals}}$



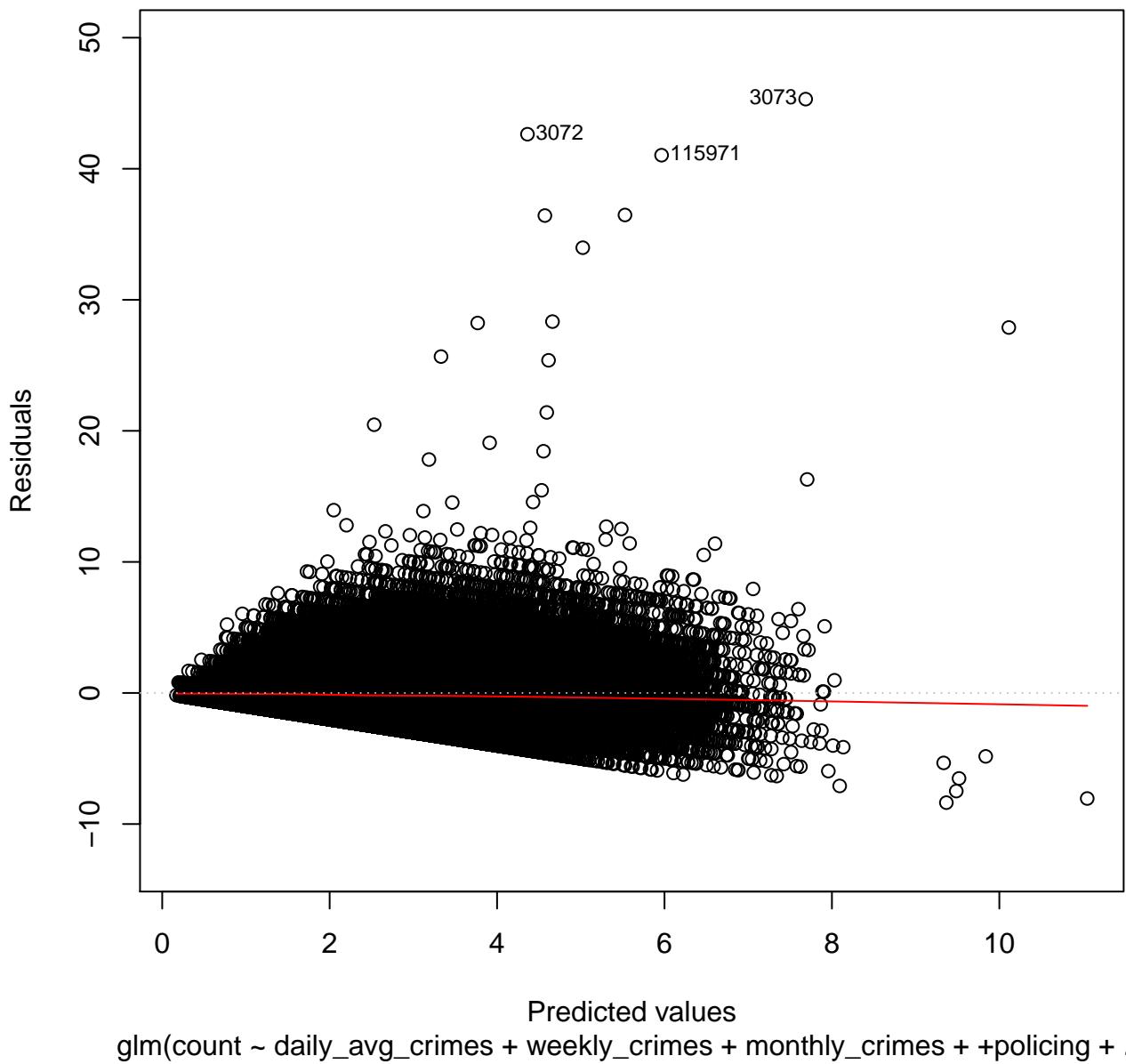
### Residuals vs Leverage



### Histogram of histdata\$count



Residuals vs Fitted



### Normal Q–Q

Std. deviance resid.

25  
20  
15  
10  
5  
0  
-5

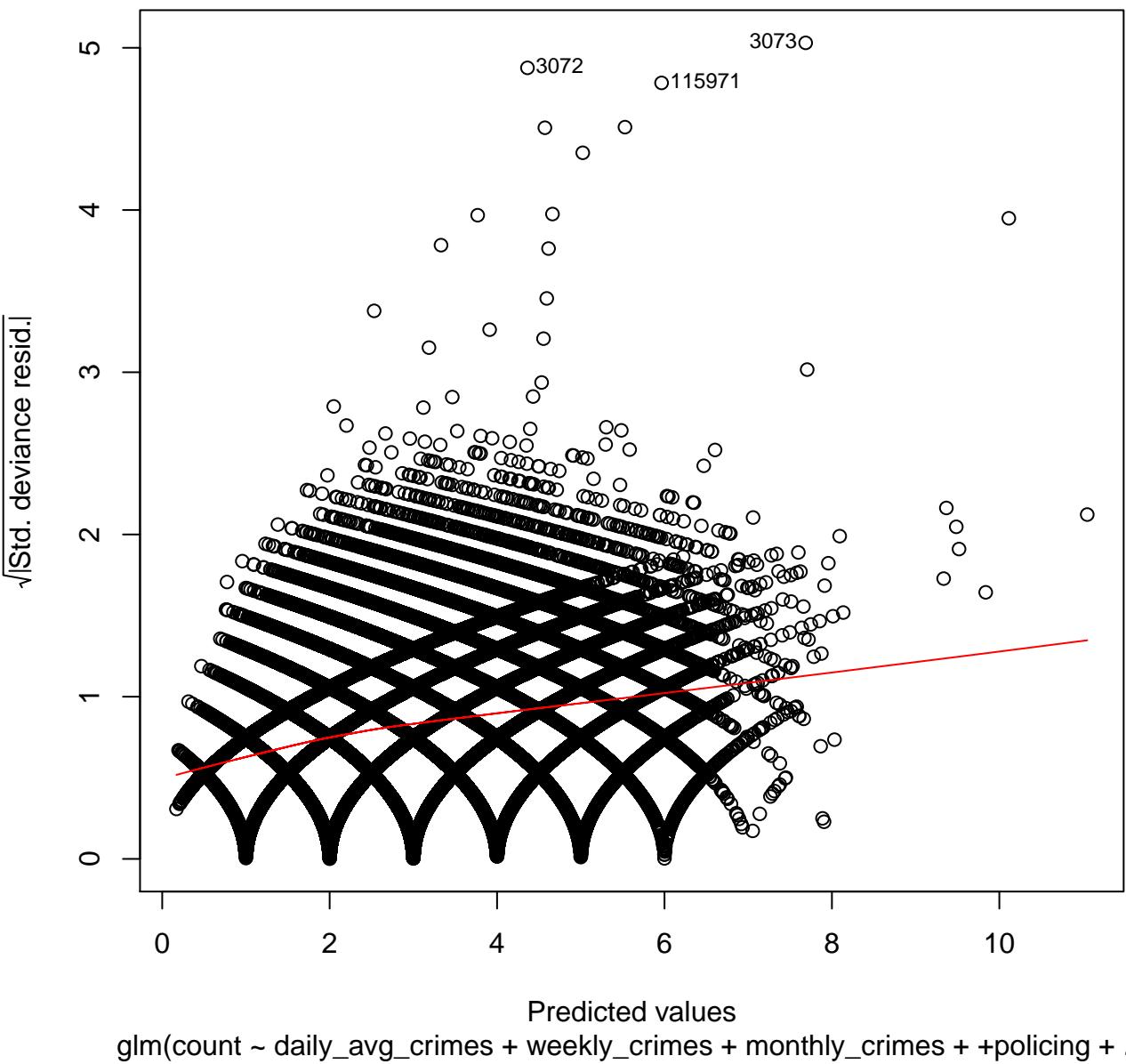
-4 -2 0 2 4

Theoretical Quantiles

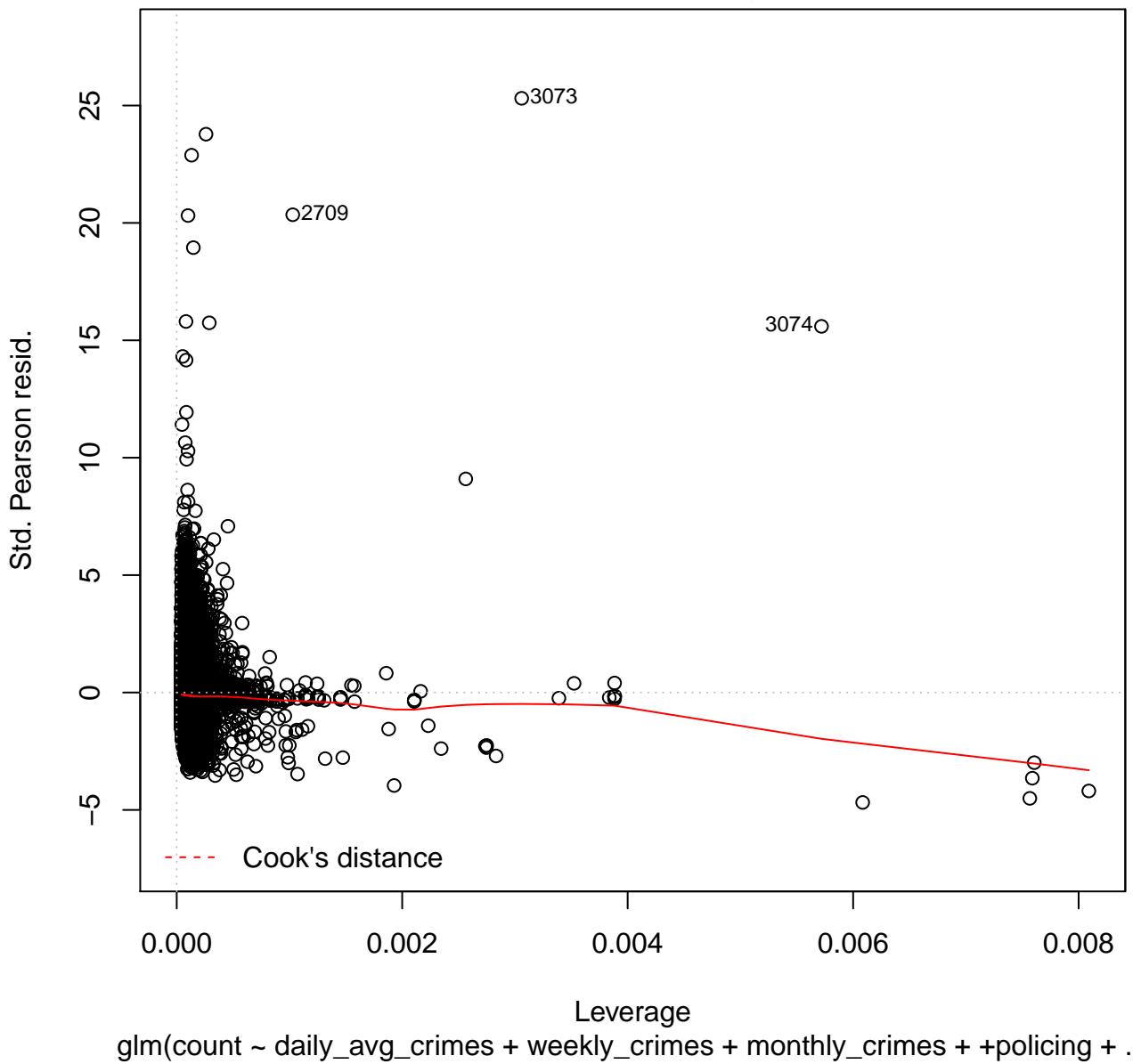
glm(count ~ daily\_avg\_crimes + weekly\_crimes + monthly\_crimes + +policing + ...)

30730  
3072  
115971

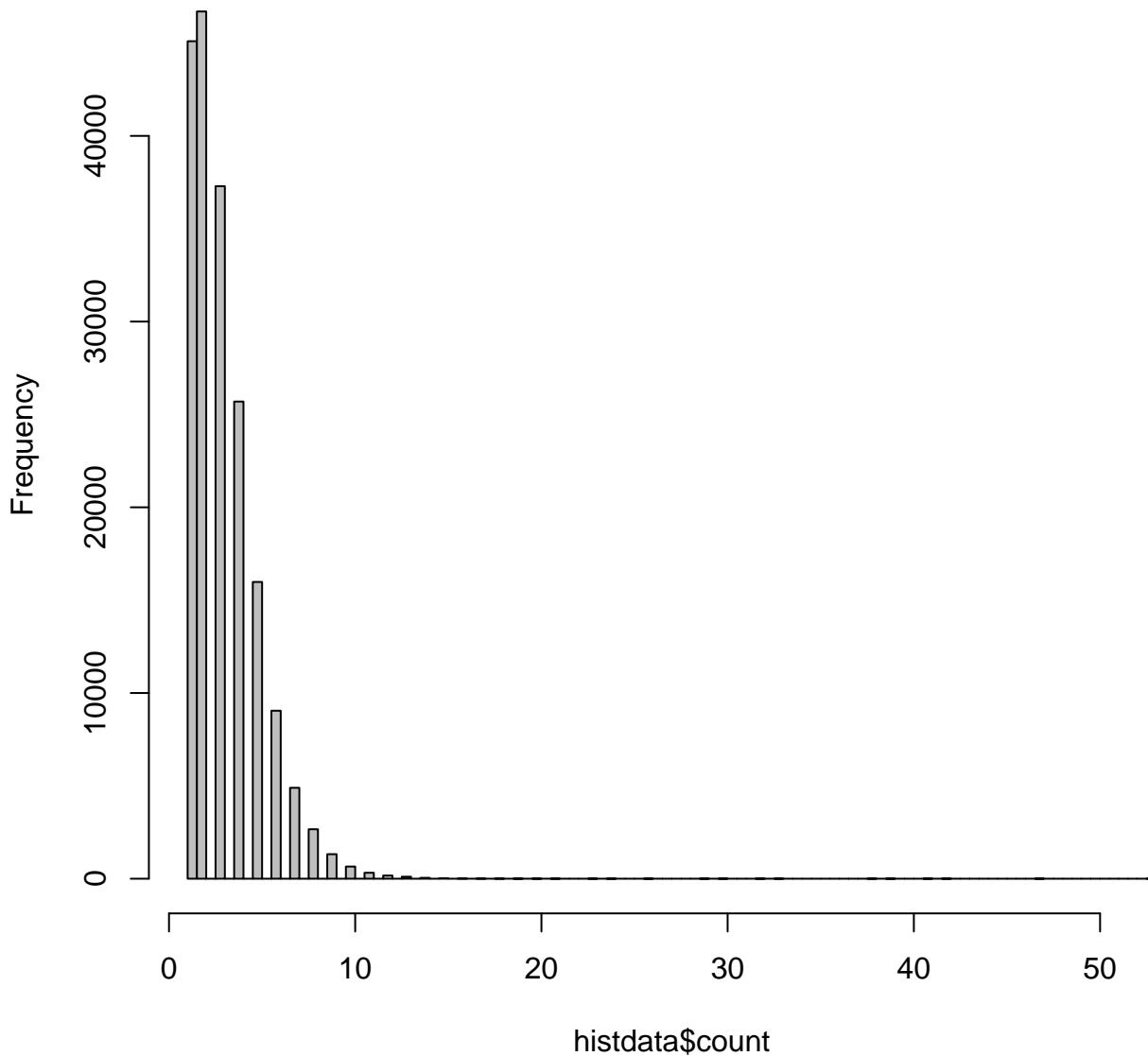
### Scale–Location



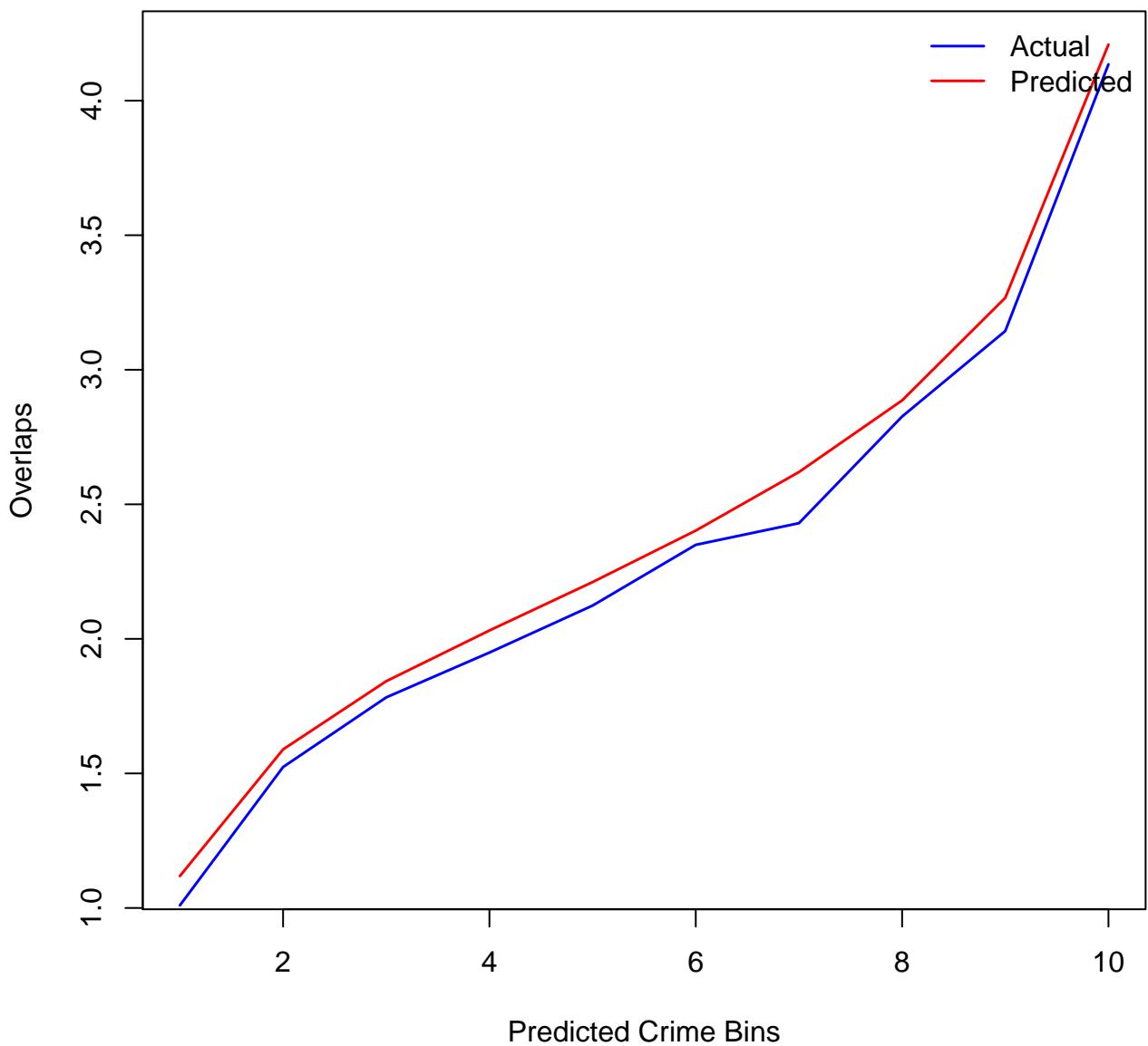
### Residuals vs Leverage



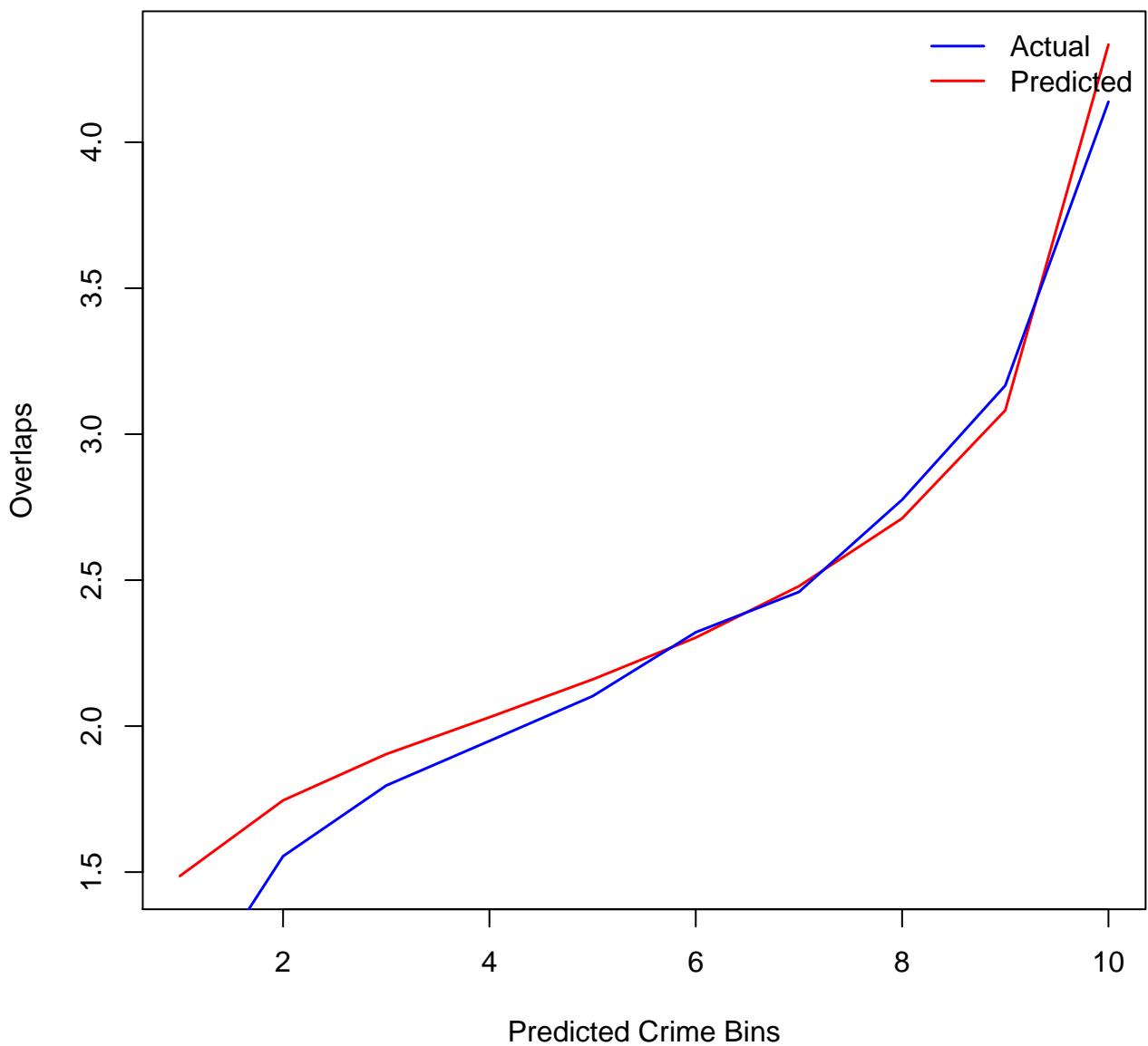
### Histogram of histdata\$count



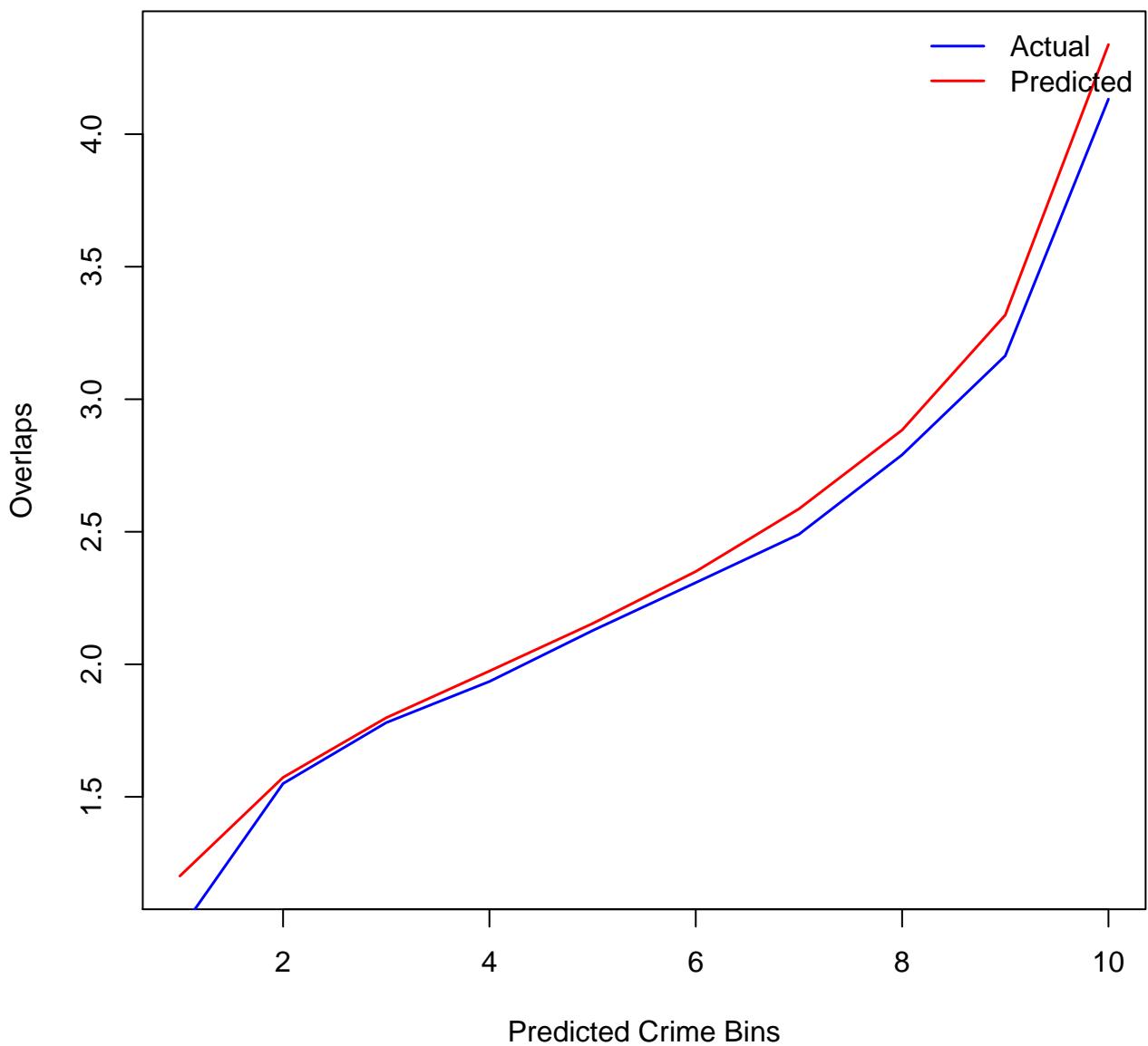
## Actual vs. Predicted GLM

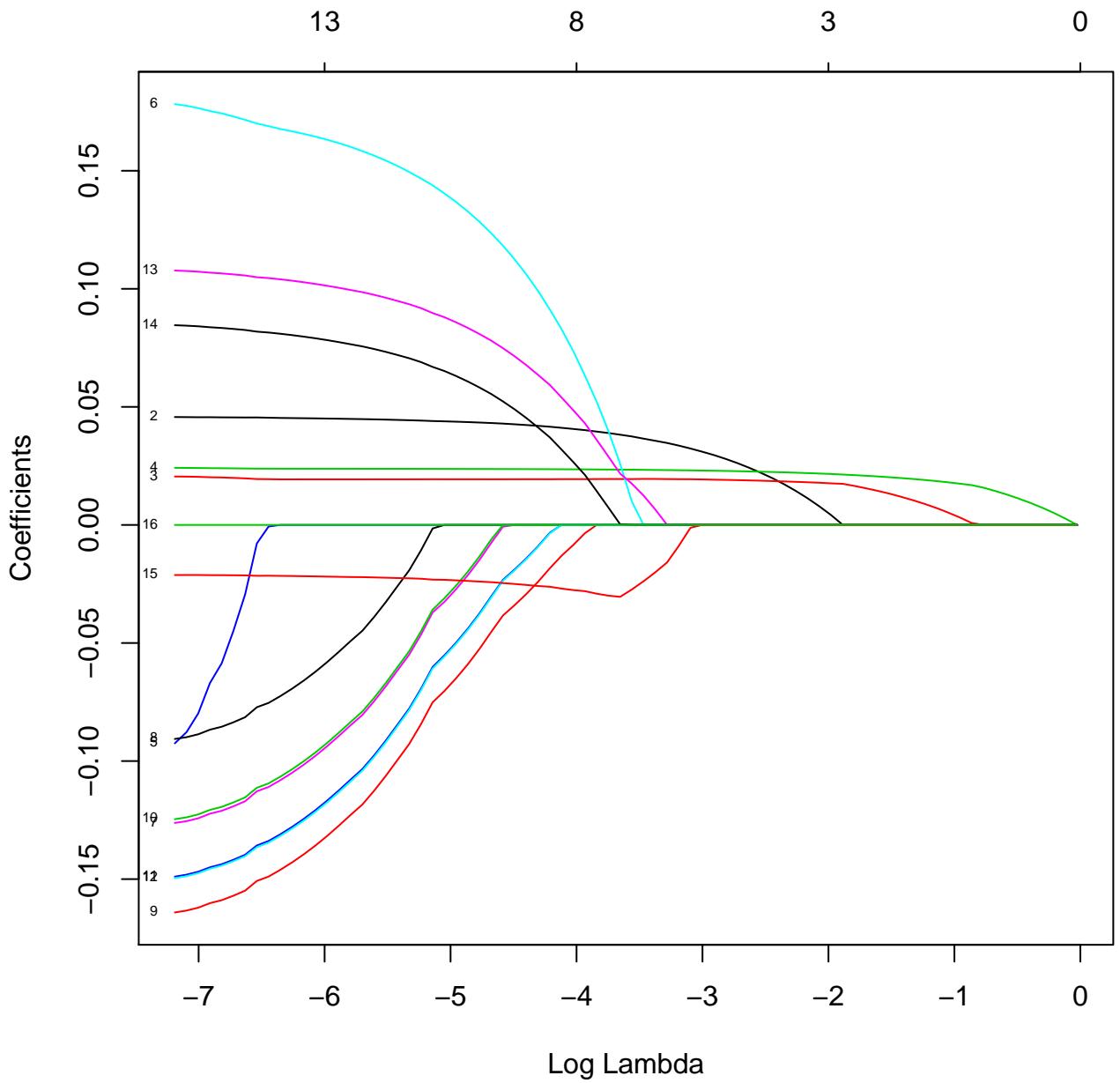


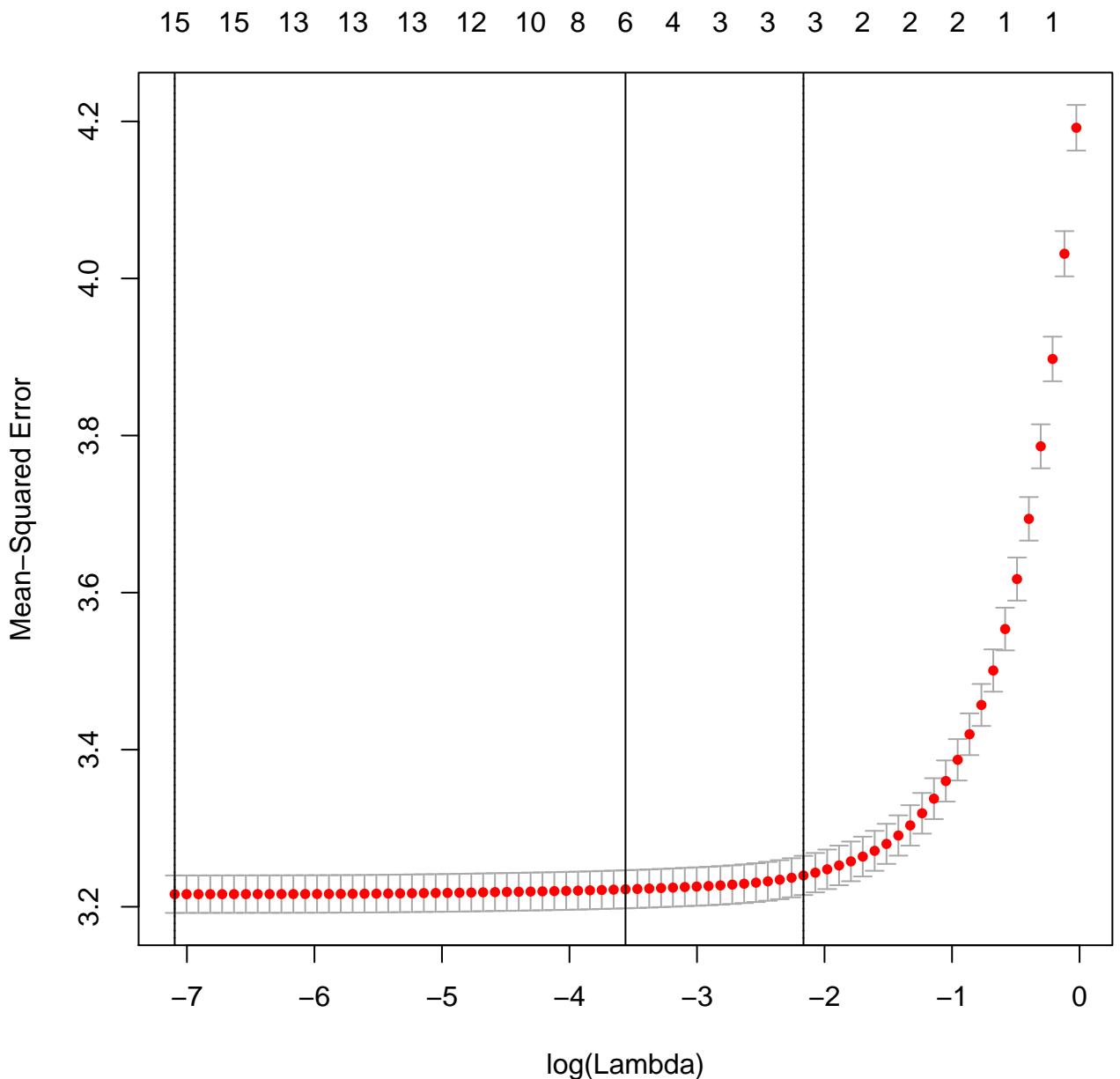
## Actual vs. Predicted NB



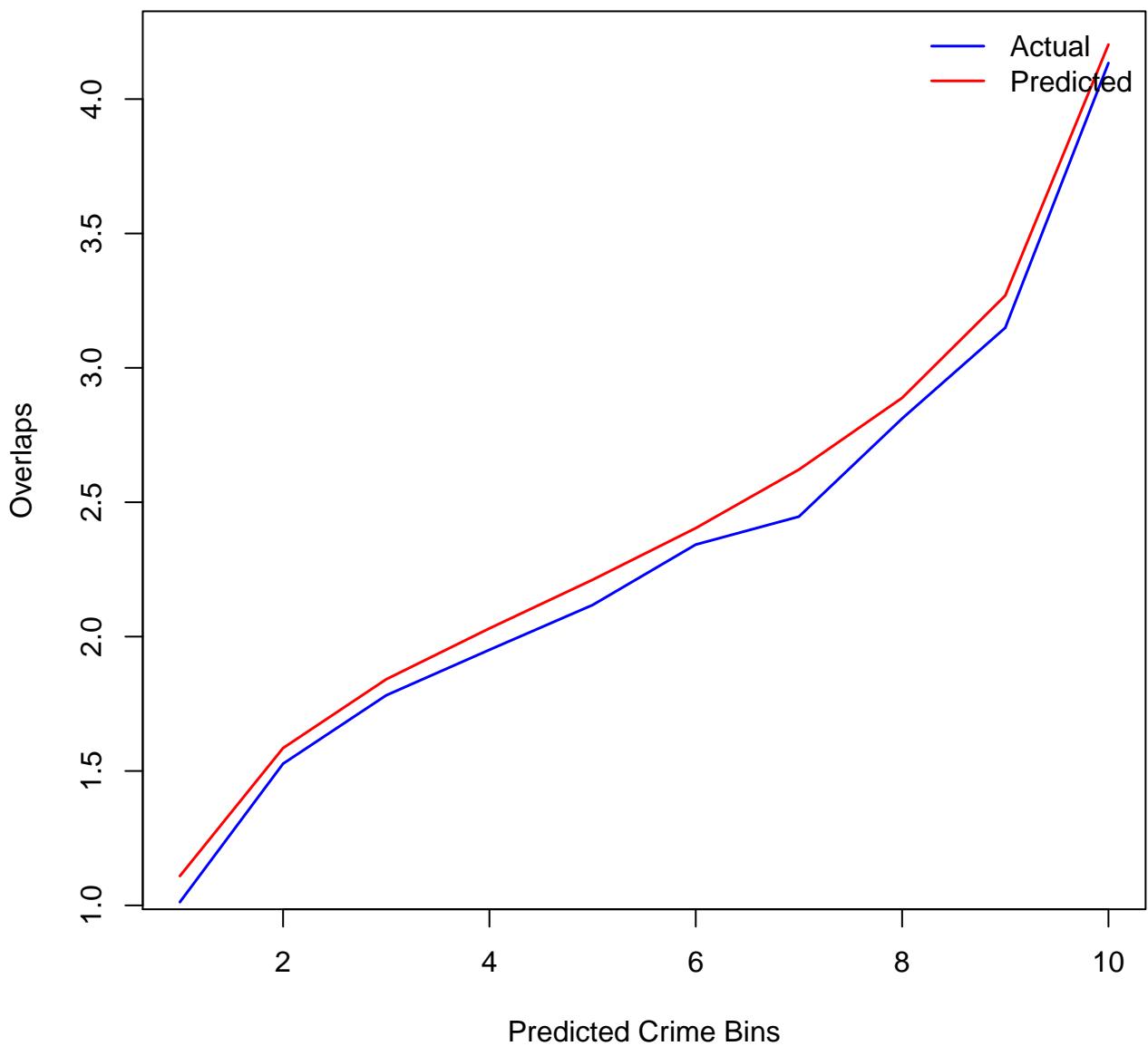
## Actual vs. Predicted GLM NB2

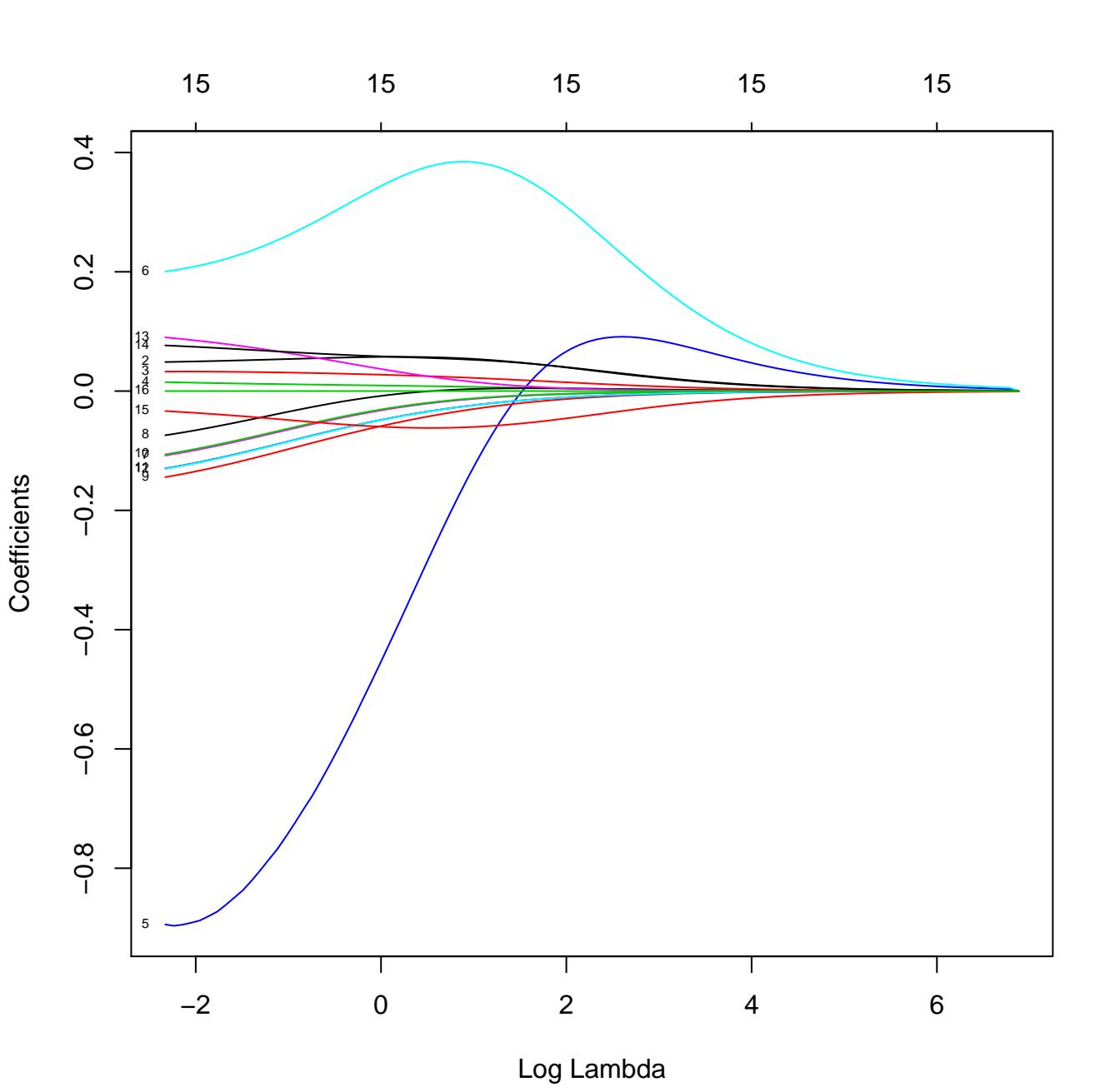


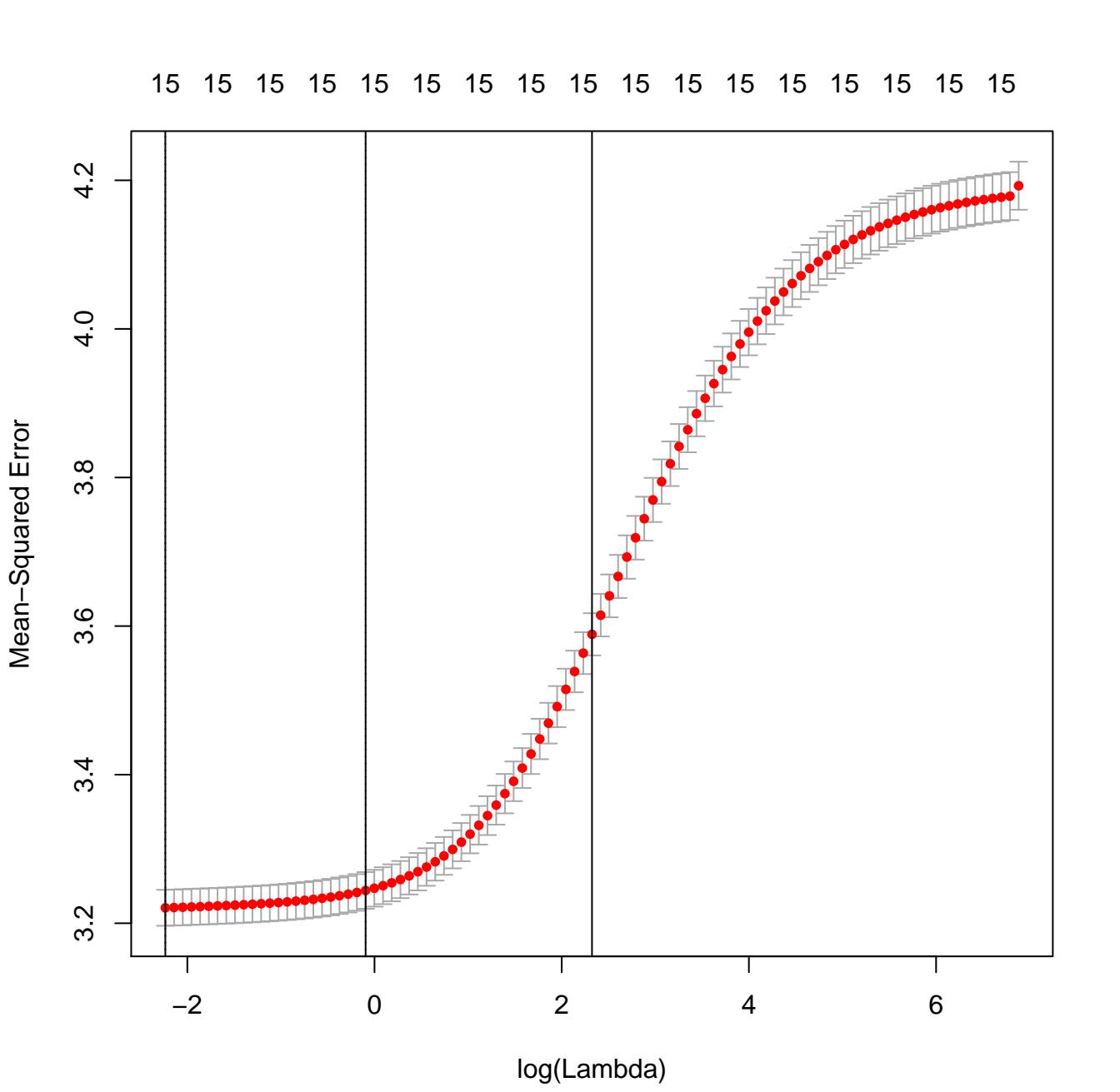




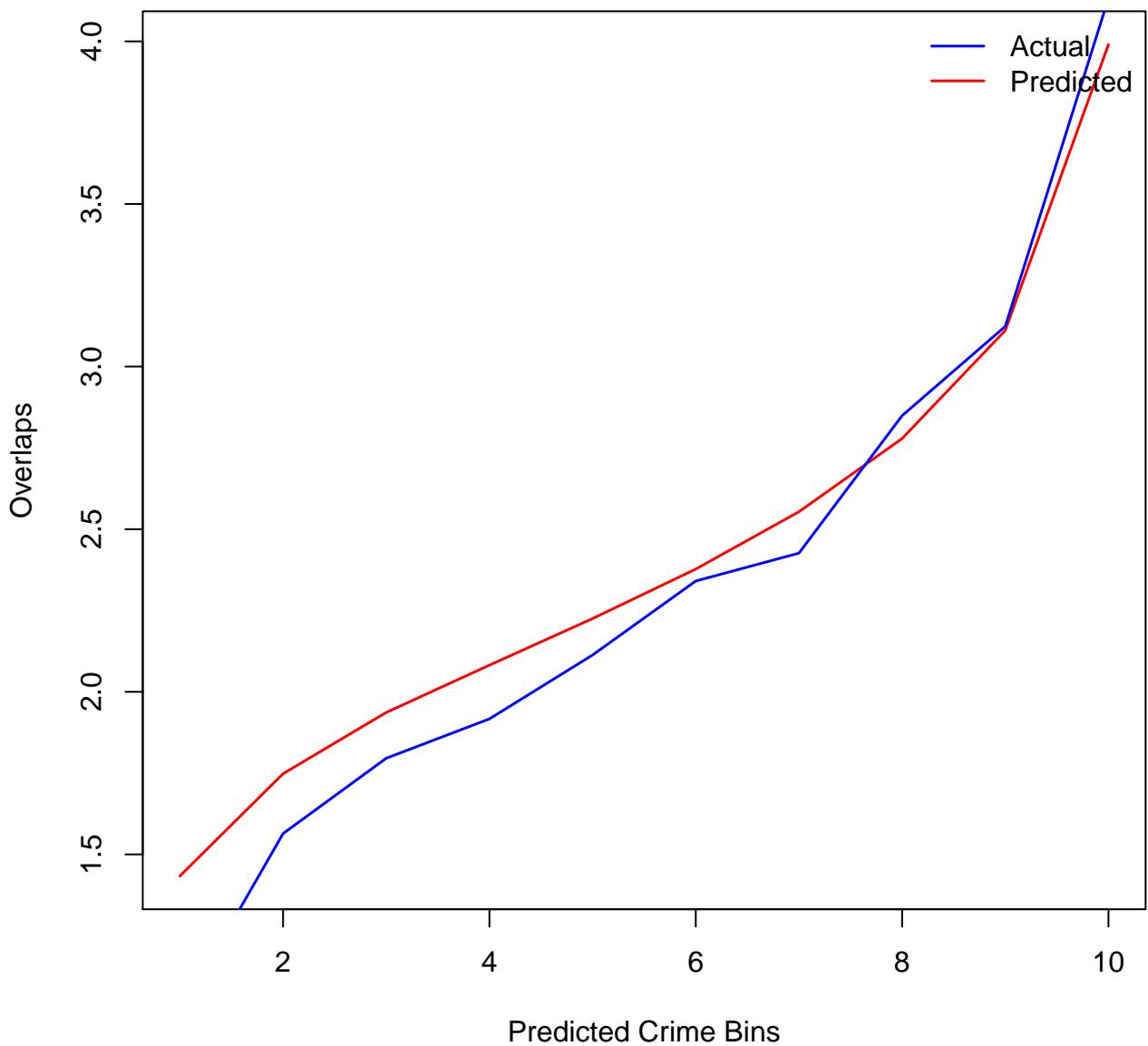
## Actual vs. Predicted GLM Lasso







## Actual vs. Predicted GLM Ridge



size of tree

X-val Relative Error

