crosssecurity.r

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#!/usr/bin/r  
  
set.seed(12345)  
n <- 24  
drop <- 2  
sex <- sample(c("M", "F"), n, replace=TRUE)  
x1 <- 1:n  
x2 <- sample(1:n)  
extra <- c( rep(0, n - drop), floor(15 + 10 \* rnorm(drop)) )  
y1 <- x1 + 3\*x2 + 6\*(sex=="M") + floor(10 \* rnorm(n)) + extra  
y2 <- x1 - 2\*x2 - 8\*(sex=="M") + floor(10 \* rnorm(n)) + extra  
# assign non-zero weights to 'dropped' obs  
wt <- c(rep(1, n-drop), rep(.2,drop))  
  
X <- cbind(x1, x2)  
Y <- cbind(y1, y2)  
c(X)

## [1] 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 1  
## [26] 12 20 8 23 3 9 14 13 4 10 7 2 15 18 17 11 19 6 24 5 16 21 22

c(X, w=wt)

##   
## 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0   
##   
## 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 1.0 12.0 20.0 8.0 23.0 3.0 9.0 14.0   
##   
## 13.0 4.0 10.0 7.0 2.0 15.0 18.0 17.0 11.0 19.0 6.0 24.0 5.0 16.0 21.0 22.0   
## w1 w2 w3 w4 w5 w6 w7 w8 w9 w10 w11 w12 w13 w14 w15 w16   
## 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0   
## w17 w18 w19 w20 w21 w22 w23 w24   
## 1.0 1.0 1.0 1.0 1.0 1.0 0.2 0.2

c(X, Y)

## [1] 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19  
## [20] 20 21 22 23 24 1 12 20 8 23 3 9 14 13 4 10 7 2 15  
## [39] 18 17 11 19 6 24 5 16 21 22 25 64 79 30 78 11 17 73 54  
## [58] 33 17 22 28 73 83 58 55 80 29 86 55 76 102 106 1 -24 -29 9  
## [77] -65 1 -25 -23 -10 -4 -28 6 24 -19 -34 -26 -13 -31 22 -14 20 -10 -15  
## [96] 7

c(X, Y, w=wt)

##   
## 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0   
##   
## 14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 1.0 12.0   
##   
## 20.0 8.0 23.0 3.0 9.0 14.0 13.0 4.0 10.0 7.0 2.0 15.0 18.0   
##   
## 17.0 11.0 19.0 6.0 24.0 5.0 16.0 21.0 22.0 25.0 64.0 79.0 30.0   
##   
## 78.0 11.0 17.0 73.0 54.0 33.0 17.0 22.0 28.0 73.0 83.0 58.0 55.0   
##   
## 80.0 29.0 86.0 55.0 76.0 102.0 106.0 1.0 -24.0 -29.0 9.0 -65.0 1.0   
##   
## -25.0 -23.0 -10.0 -4.0 -28.0 6.0 24.0 -19.0 -34.0 -26.0 -13.0 -31.0 22.0   
## w1 w2 w3 w4 w5 w6 w7 w8   
## -14.0 20.0 -10.0 -15.0 7.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0   
## w9 w10 w11 w12 w13 w14 w15 w16 w17 w18 w19 w20 w21   
## 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0   
## w22 w23 w24   
## 1.0 0.2 0.2

c(x1, y1)

## [1] 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19  
## [20] 20 21 22 23 24 25 64 79 30 78 11 17 73 54 33 17 22 28 73  
## [39] 83 58 55 80 29 86 55 76 102 106

c(x1, y1, w=wt)

##   
## 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0   
##   
## 14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 25.0 64.0   
##   
## 79.0 30.0 78.0 11.0 17.0 73.0 54.0 33.0 17.0 22.0 28.0 73.0 83.0   
## w1 w2 w3 w4   
## 58.0 55.0 80.0 29.0 86.0 55.0 76.0 102.0 106.0 1.0 1.0 1.0 1.0   
## w5 w6 w7 w8 w9 w10 w11 w12 w13 w14 w15 w16 w17   
## 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0   
## w18 w19 w20 w21 w22 w23 w24   
## 1.0 1.0 1.0 1.0 1.0 0.2 0.2