DP\_Third\_Laboratory

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library(sdcMicro)

#sdcApp()

inputdata <- readMicrodata(path="testdata", type="rdf", convertCharToFac=FALSE, drop\_all\_missings=FALSE)  
obj <- data.frame(matrix(nrow=nrow(inputdata), ncol=0))  
obj$inputdata <- inputdata  
inputdataB <- obj$inputdata

inputdata <- varToFactor(obj=inputdataB, var="urbrur")  
inputdata <- varToFactor(obj=inputdataB, var="roof")  
inputdata <- varToFactor(obj=inputdataB, var="walls")  
inputdata <- varToFactor(obj=inputdataB, var="water")  
inputdata <- varToFactor(obj=inputdataB, var="electcon")  
inputdata <- varToFactor(obj=inputdataB, var="relat")  
inputdata <- varToFactor(obj=inputdataB, var="sex")  
inputdata <- varToFactor(obj=inputdataB, var="age")  
inputdata <- varToFactor(obj=inputdataB, var="hhcivil")  
## Set up sdcMicro object  
sdcObj <- createSdcObj(dat=inputdata,  
 keyVars=c("urbrur","roof","walls","water","electcon","relat","sex","age","hhcivil"),   
 numVars=NULL,   
 weightVar=NULL,   
 hhId=NULL,   
 strataVar=NULL,   
 pramVars=NULL,   
 excludeVars=NULL,   
 seed=0,   
 randomizeRecords=FALSE,   
 alpha=c(1))

slotNames(sdcObj)

## [1] "origData" "keyVars" "pramVars"   
## [4] "numVars" "ghostVars" "weightVar"   
## [7] "hhId" "strataVar" "sensibleVar"   
## [10] "manipKeyVars" "manipPramVars" "manipNumVars"   
## [13] "manipGhostVars" "manipStrataVar" "originalRisk"   
## [16] "risk" "utility" "pram"   
## [19] "localSuppression" "options" "additionalResults"  
## [22] "set" "prev" "deletedVars"

str(sdcObj@risk)

## List of 2  
## $ global :List of 5  
## ..$ risk : num 0.561  
## ..$ risk\_ER : num 2571  
## ..$ risk\_pct : num 56.1  
## ..$ threshold: num 0  
## ..$ max\_risk : num 0.01  
## $ individual: num [1:4580, 1:3] 0.333 0.333 0.143 0.1 1 ...  
## ..- attr(\*, "dimnames")=List of 2  
## .. ..$ : NULL  
## .. ..$ : chr [1:3] "risk" "fk" "Fk"

riskBefore <- sdcObj@risk$global$risk  
  
riskBeforeVector <- sdcObj@risk$individual[,"risk"]

mean(riskBeforeVector)

## [1] 0.5613537

sdcObjAfter <- kAnon(sdcObj, importance=c(1,6,3,7,4,8,2,9,5), combs=NULL, k=c(5))

str(sdcObjAfter@risk)

## List of 2  
## $ global :List of 5  
## ..$ risk : num 0.0366  
## ..$ risk\_ER : num 168  
## ..$ risk\_pct : num 3.66  
## ..$ threshold: num 0.0101  
## ..$ max\_risk : num 0.01  
## $ individual: num [1:4580, 1:3] 0.00909 0.00862 0.02778 0.02564 0.02 ...  
## ..- attr(\*, "dimnames")=List of 2  
## .. ..$ : NULL  
## .. ..$ : chr [1:3] "risk" "fk" "Fk"

riskAfter <- sdcObjAfter@risk$global$risk  
  
riskAfterVector <- sdcObjAfter@risk$individual[,"risk"]

mean(riskAfterVector)

## [1] 0.03662031

#sdcApp()

indivRisk3 <- c(0.004975, 0.004975, 0.001664, 0.001110)

1 - prod(1-indivRisk3)

## [1] 0.01266989

Higher

Check\_hhrk\_2.3:

testdatadf<-as.data.frame(testdata)  
  
#categorical vars must be factors  
inputdata <- varToFactor(obj=testdatadf, var=c("urbrur","roof","walls","water","electcon","relat","sex","age","hhcivil"))  
  
#defining the sdcObject  
sdcObj <- createSdcObj(  
 dat=inputdata,  
 keyVars=c("urbrur","roof","walls","water","electcon","relat","sex","age","hhcivil"),  
 weightVar=c("sampling\_weight"),  
 hhId=c("ori\_hid"),  
)  
  
#obtaining the household risk from the object  
hh\_rk <- sdcObj@risk$individual[sdcObj@origData$ori\_hid==1,"hier\_risk"]  
cat("The household risk for hh\_id=1 is:",hh\_rk[1])

## The household risk for hh\_id=1 is: 0.01266991

data(francdat)

#sdcApp()

testdatadf<-as.data.frame(francdat)  
  
#categorical vars must be factors  
inputdata <- varToFactor(obj=testdatadf, var=c("Key1","Key2","Key4"))  
  
#defining the sdcObject  
sdcObj <- createSdcObj(  
 dat=inputdata,  
 keyVars=c("Key1","Key2","Key4")  
)  
  
sdcObj <- varToFactor(sdcObj, "Key1")  
sdcObj <- varToFactor(sdcObj, "Key2")  
sdcObj <- varToFactor(sdcObj, "Key4")

sdcSuda <- suda2(obj = sdcObj)  
  
sdcSuda@risk$suda2$score

## [1] 0 0 0 3 2 2 3 0