library("bnlearn")

library("qgraph")

library(foreign)

zz <- file.path("U:","My Documents")

bnnloc <- file.path(zz,"BNN.sav")

bnn <- read.spss(bnnloc)

BN <- data.frame(bnn)

BST <- boot.strength(BN, R = 200,

algorithm = "tabu",

debug = TRUE,

cpdag = TRUE)

avgnet1 <- averaged.network(BST,

threshold = 0.85)

astr1 <- arc.strength(avgnet1, BN,"bic-g")

plot(avgnet1)

BST2 <- boot.strength(BN, R = 200,

algorithm = "pc.stable",

debug = TRUE,

cpdag = TRUE)

avgnet2 <- averaged.network(BST2,

threshold = 0.85)

astr2 <- arc.strength(avgnet2,

BN,"bic-g")

plot(avgnet2)

BST3 <- boot.strength(BN, R = 200,

algorithm = "hc",

debug = TRUE,

cpdag = TRUE)

avgnet3 <- averaged.network(BST3,

threshold = 0.85)

plot(avgnet3)

astr3 <- arc.strength(avgnet3,BN,"bic-g")

print(astr1)

print(astr2)

print(astr3)

par(mfrow = c(1,2))

qgraph(astr1,layout="circle",posCol="blue",negCol="orange")

qgraph(astr2,layout="circle",posCol="blue",negCol="brown")

qgraph(astr3,layout="circle",posCol="blue",negCol="red")