**ARYAMAN MISHRA**

**19BCE1027\_LAB 09**

**Implementation:**

Install and import the library(arulesViz) and Show the Visual output of Association Rules for your data. Assume your own dataset (may be downloaded) unsing below link wherever necessary.

library(arules)

library(arulesViz)

library(knitr)

library(magrittr)

library(dplyr)

library(plotly)

med=read.csv("https://umich.instructure.com/files/1678540/download?download\_frd=1", stringsAsFactors = FALSE)

med=med[, -1]

write.csv(med, "medication.csv", row.names=F)

kable(med[1:5, ])

med<-read.transactions("medication.csv", sep = ",", skip = 1, rm.duplicates=TRUE)

summary(med)

inspect(med[1:5,])

apriori(med)

med\_rule=apriori(med, parameter=list(support=0.01, confidence=0.25, minlen=2))

print(med\_rule)

summary(med\_rule)

plot(sort(med\_rule))

sortedRule = sort(med\_rule)

x1 = sortedRule@quality$support

y1 = sortedRule@quality$confidence

z1 = sortedRule@quality$lift

col1 = sortedRule@quality$count

ruleNames <- paste0("Rule", c(1:length(sortedRule@quality$support)))

plot\_ly(x = ~x1, y = ~y1, z = ~z1, color = ~z1, name=ruleNames) %>%

add\_markers() %>%

layout(title=paste0("Arule Support-Confidence-Lift Plot (for all ", length(sortedRule@quality$support), " rules)"),

scene = list(xaxis = list(title = 'Support'),

yaxis = list(title = 'Confidence'),

zaxis = list(title = 'Lift'))) %>%

hide\_colorbar()

inspect(med\_rule[1:29])

inspect(sort(med\_rule, by="lift")[1:29]) 

