## Week 3 ACTIVITY

##Select the an “interesting” rule and specify the following: ##. Support, Confidence and Lift values ##. An explanation of the pattern and why you believe it is “interesting”" based on the ## support, conf, lift, … ## Create 1 visualization / table of interesting rule

## ## In - Week 3 Activity from

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# Load libaries

– {R} library(arules) library(arulesViz) library(datasets)

Groceries <- read.csv(“C:/Users/Joyce/Desktop/Syracuse/IST707/Classwork/week3/groceries.csv”, header=FALSE) data(Groceries)

itemFrequencyPlot(Groceries,topN=20,type=“absolute”) # Get the rules rules <- apriori(Groceries, parameter = list(supp = 0.001, conf = 0.8))

# Show the top 5 rules, but only 2 digits

options(digits=2) inspect(rules[1:5])

summary(rules)

rules<-sort(rules, by=“confidence”, decreasing=TRUE) rules <- apriori(Groceries, parameter = list(supp = 0.001, conf = 0.8,maxlen=3))

subset.matrix <- is.subset(rules, rules) subset.matrix[lower.tri(subset.matrix, diag=T)] <- NA redundant <- colSums(subset.matrix, na.rm=T) >= 1 rules.pruned <- rules[!redundant] rules<-rules.pruned

# Run some rules

rules<-apriori(data=Groceries, parameter=list(supp=0.001,conf = 0.08), appearance = list(default=“lhs”,rhs=“whole milk”), control = list(verbose=F)) rules<-sort(rules, decreasing=TRUE,by=“confidence”) inspect(rules[1:5])

rules<-apriori(data=Groceries, parameter=list(supp=0.001,conf = 0.15,minlen=2), appearance = list(default=“rhs”,lhs=“whole milk”), control = list(verbose=F)) rules<-sort(rules, decreasing=TRUE,by=“confidence”) inspect(rules[1:10])

# Visualizations

library(arulesViz) plot(rules,method=“graph”,interactive=TRUE,shading=NA)

# retail dataset

retail <- read.transactions(“C:/Users/Joyce/Desktop/Syracuse/IST707/Classwork/week3/retail.csv”, format=“basket”, sep=“,”) rules <- apriori(retail, parameter = list(supp = 0.001, conf = 0.8,maxlen=3)) rules<-sort(rules, decreasing=TRUE,by=“confidence”) inspect(rules[1:10])