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**Performance Measures (ARI, JAccard)**

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Calculation of Performance measure ARI, Jaccard and others for GoF Pattersn

We need clues package for ARI etc

Dataset(ClusterName, Dataset\_name, Rand, HA, MA, FM, Jaccard)

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setwd("D:/Experimentjournal/resultsofclusteringevaluationARIjaccard/GoF")

temp = list.files(pattern="\*.csv")

for (i in 1:length(temp)) assign(temp[i], read.csv(temp[i]))

totalfiles<- length(temp)

Out <- matrix(NA, nrow= totalfiles\*50, ncol=7)

Orig\_Labels <- c(1,2,2,1,3,3,2,2,1,2,2,3,3,3,3,3,1,2,1,3,3,3,3)

Counter <- 0

for(k in 1:totalfiles)

{

Dataset<- read.csv(temp[k],header=TRUE)

Len <-length(Dataset)

Rows <- nrow(Dataset)

Filename <- paste(substr(temp[k],1, nchar(temp[k])-4))

for(j in 1:Rows)

{

Counter <- Counter +1

Predict\_Labels <- c()

Subfilename <- toString(Dataset[j,2])

Predict\_Labels <- c(Predict\_Labels ,Dataset[k,3:25])

Measures <- adjustedRand(Orig\_Labels, Predict\_Labels)

Out[Counter,1:1] <-Filename

Out[Counter,2:2] <- Subfilename

Out[Counter,3:3] <- Measures[1]

Out[Counter,3:3] <- Measures[1]

Out[Counter,4:4] <- Measures[2]

Out[Counter,5:5] <- Measures[3]

Out[Counter,6:6] <- Measures[4]

Out[Counter,7:7] <- Measures[5]

}

}

write.csv(Out, ("GoF\_Clustering\_Evaluation\_Results.csv"))

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Calculation of Performance measure ARI, Jaccard and others for GoF Pattersn

We need clues package for ARI etc

Dataset(ClusterName, Dataset\_name, Rand, HA, MA, FM, Jaccard)

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setwd("D:/Experimentjournal/resultsofclusteringevaluationARIjaccard/Real")

temp = list.files(pattern="\*.csv")

for (i in 1:length(temp)) assign(temp[i], read.csv(temp[i]))

totalfiles<- length(temp)

Out <- matrix(NA, nrow= totalfiles\*50, ncol=7)

Orig\_Labels <- c(2,4,1,2,1,3,3,3,1,5,4,5,1,1,5,2,4,3,4,4,5,2,2,1,1,5,5,2,4,3,3,1,5,5)

Counter <- 0

for(k in 1:totalfiles)

{

Dataset<- read.csv(temp[k],header=TRUE)

Len <-length(Dataset)

Rows <- nrow(Dataset)

Filename <- paste(substr(temp[k],1, nchar(temp[k])-4))

for(j in 1:Rows)

{

Counter <- Counter +1

Predict\_Labels <- c()

Subfilename <- toString(Dataset[j,2])

Predict\_Labels <- c(Predict\_Labels ,Dataset[k,3:36])

Measures <- adjustedRand(Orig\_Labels, Predict\_Labels)

Out[Counter,1:1] <-Filename

Out[Counter,2:2] <- Subfilename

Out[Counter,3:3] <- Measures[1]

Out[Counter,3:3] <- Measures[1]

Out[Counter,4:4] <- Measures[2]

Out[Counter,5:5] <- Measures[3]

Out[Counter,6:6] <- Measures[4]

Out[Counter,7:7] <- Measures[5]

}

}

write.csv(Out, ("Real\_Clustering\_Evaluation\_Results.csv"))

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Calculation of Performance measure ARI, Jaccard and others for GoF Pattersn

We need clues package for ARI etc

Dataset(ClusterName, Dataset\_name, Rand, HA, MA, FM, Jaccard)

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setwd("D:/Experimentjournal/resultsofclusteringevaluationARIjaccard/Security")

temp = list.files(pattern="\*.csv")

for (i in 1:length(temp)) assign(temp[i], read.csv(temp[i]))

totalfiles<- length(temp)

Out <- matrix(NA, nrow= totalfiles\*36, ncol=7)

Orig\_Labels <- c(8,3,2,2,6,1,5,5,8,6,6,6,6,6,7,3,3,3,6,6,7,8,5,7,7,2,7,8,1,2,4,5,7,4,1,3,1,1,7,2,3,8,8,4,3,3)

Counter <- 0

for(k in 1:totalfiles)

{

Dataset<- read.csv(temp[k],header=TRUE)

Len <-length(Dataset)

Rows <- nrow(Dataset)

Filename <- paste(substr(temp[k],1, nchar(temp[k])-4))

for(j in 1:Rows)

{

Counter <- Counter +1

Predict\_Labels <- c()

Subfilename <- toString(Dataset[j,2])

Predict\_Labels <- c(Predict\_Labels ,Dataset[k,3:48])

Measures <- adjustedRand(Orig\_Labels, Predict\_Labels)

Out[Counter,1:1] <-Filename

Out[Counter,2:2] <- Subfilename

Out[Counter,3:3] <- Measures[1]

Out[Counter,3:3] <- Measures[1]

Out[Counter,4:4] <- Measures[2]

Out[Counter,5:5] <- Measures[3]

Out[Counter,6:6] <- Measures[4]

Out[Counter,7:7] <- Measures[5]

}

}

write.csv(Out, ("Security\_Clustering\_Evaluation\_Results.csv"))