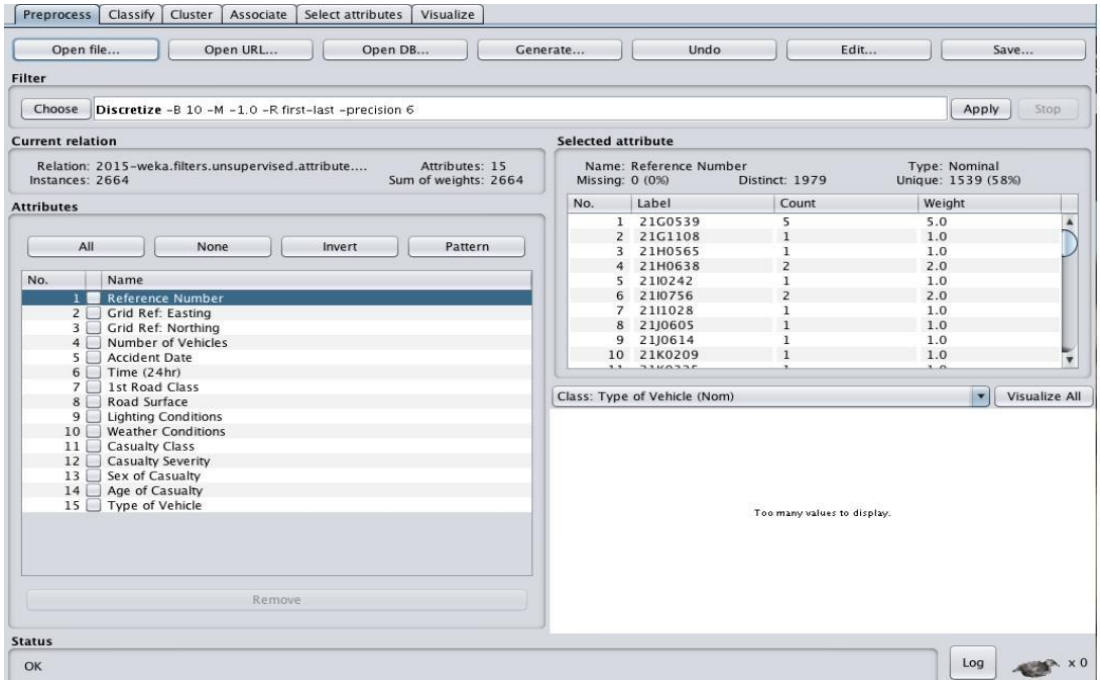
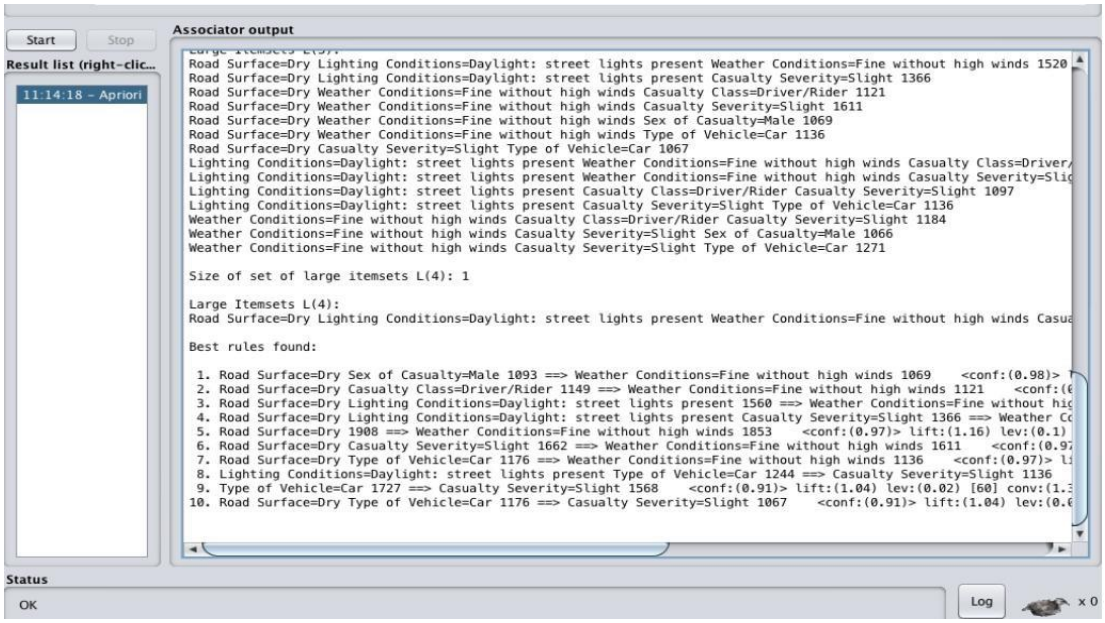
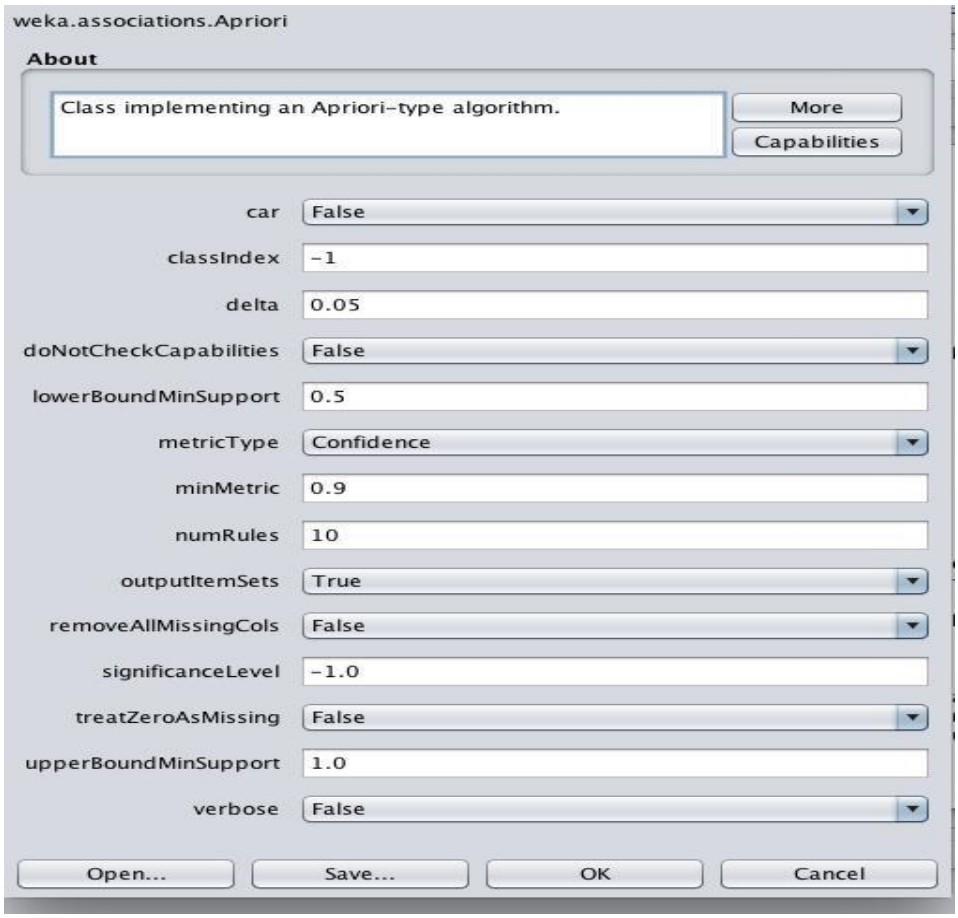
EXPERIMENT-9

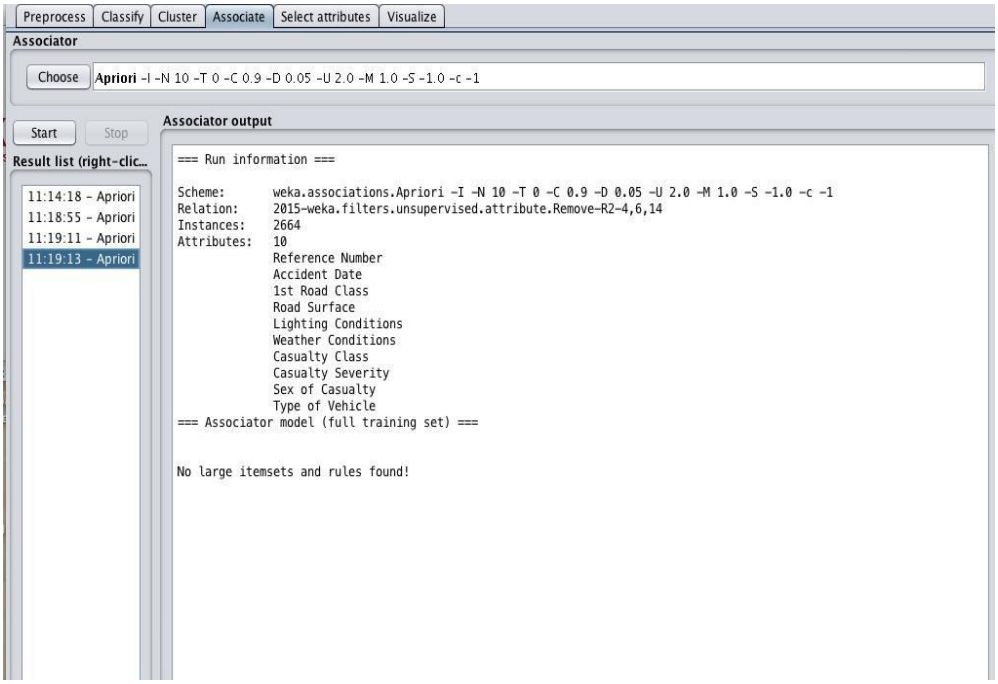
FREQUENT PATTERN MINING USING ASSOCIATION RULE THROUGH WEKA AND R TOOLS

OUTPUT:

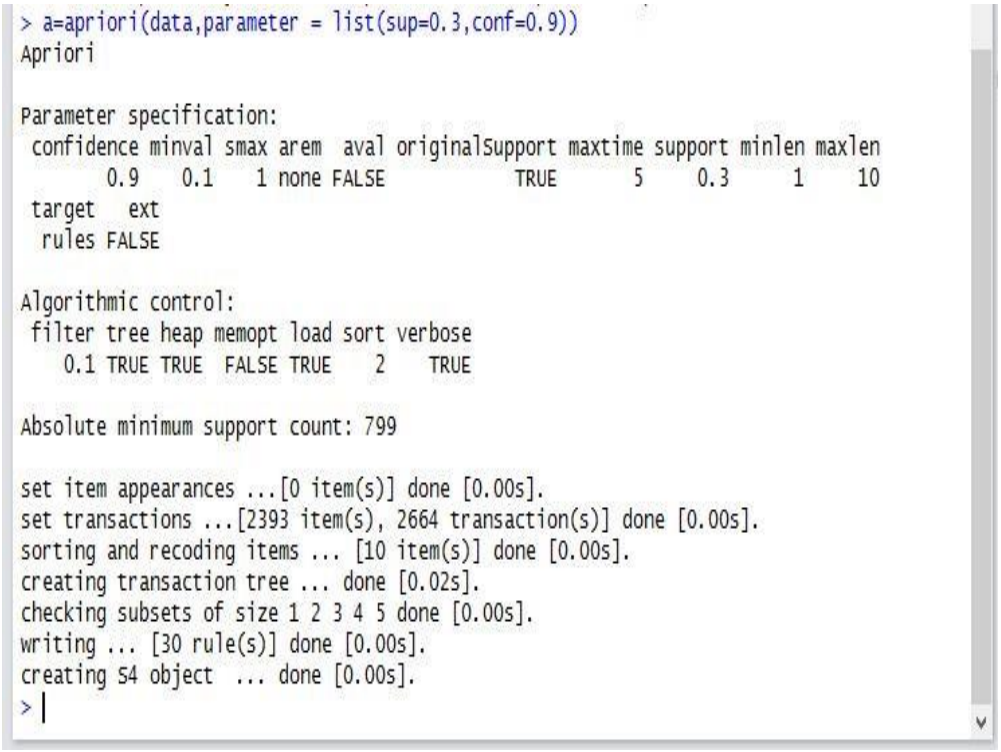



Start
Stop
Result list (right-clic...
11:14:18 - Apriori
Associator output
Road Surface=Dry Lighting Conditions=Daylight: street lights present Weather Conditions=Fine without high winds 1520
Road Surface=Dry Lighting Conditions=Daylight: street lights present Casualty Severity=Slight 1366
Road Surface=Dry Weather Conditions=Fine without high winds Casualty Class=Driver/Rider 1121
Road Surface=Dry Weather Conditions=Fine without high winds Casualty Severity=Slight 1611
Road Surface=Dry Weather Conditions=Fine without high winds Sex of Casualty=Male 1069
Road Surface=Dry Weather Conditions=Fine without high winds Type of Vehicle=Car 1136
Road Surface=Dry Casualty Severity=Slight Type of Vehicle=Car 1067
Lighting Conditions=Daylight: street lights present Weather Conditions=Fine without high winds Casualty Class=Driver/
Lighting Conditions=Daylight: street lights present Weather Conditions=Fine without high winds Casualty Severity=Slig
Lighting Conditions=Daylight: street lights present Casualty Class=Driver/Rider Casualty Severity=Slight 1097
Lighting Conditions=Daylight: street lights present Casualty Severity=Slight Type of Vehicle=Car 1136
Weather Conditions=Fine without high winds Casualty Class=Driver/Rider Casualty Severity=Slight 1184
Weather Conditions=Fine without high winds Casualty Severity=Slight Sex of Casualty=Male 1066
Weather Conditions=Fine without high winds Casualty Severity=Slight Type of Vehicle=Car 1271
Size of set of large itemsets L(4): 1
Large Itemsets L(4):
Road Surface=Dry Lighting Conditions=Daylight: street lights present Weather Conditions=Fine without high winds Casua
Best rules found:
1. Road Surface=Dry Sex of Casualty=Male 1093 ==> Weather Conditions=Fine without high winds 1069 <conf:(0.98)>
2. Road Surface=Dry Casualty Class=Driver/Rider 1149 ==> Weather Conditions=Fine without high winds 1121 <conf:(
3. Road Surface=Dry Lighting Conditions=Daylight: street lights present 1560 ==> Weather Conditions=Fine without hig
4. Road Surface=Dry Lighting Conditions=Daylight: street lights present Casualty Severity=Slight 1366 ==> Weather Co
5. Road Surface=Dry 1908 ==> Weather Conditions=Fine without high winds 1853 <conf:(0.97)> lift:(1.16) lev:(0.1)
6. Road Surface=Dry Casualty Severity=Slight 1662 ==> Weather Conditions=Fine without high winds 1611 <conf:(0.97
7. Road Surface=Dry Type of Vehicle=Car 1176 ==> Weather Conditions=Fine without high winds 1136 <conf:(0.97)> li
8. Lighting Conditions=Daylight: street lights present Type of Vehicle=Car 1244 ==> Casualty Severity=Slight 1136
9. Type of Vehicle=Car 1727 ==> Casualty Severity=Slight 1568 <conf:(0.91)> lift:(1.04) lev:(0.02) [60] conv:(1.3
10. Road Surface=Dry Type of Vehicle=Car 1176 ==> Casualty Severity=Slight 1067 <conf:(0.91)> lift:(1.04) lev:(0.0
Status
OK
Log
x 0


weka.associations.Apriori
About
Class implementing an Apriori-type algorithm.
More
Capabilities
car
False
classIndex
-1
delta
0.05
doNotCheckCapabilities
False
lowerBoundMinSupport
0.5
metricType
Confidence
minMetric
0.9
numRules
10
outputItemSets
True
removeAllMissingCols
False
significanceLevel
-1.0
treatZeroAsMissing
False
upperBoundMinSupport
1.0
verbose
False
Open...
Save...
OK
Cancel


Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Associator
Choose
Apriori -I -N 10 -T 0 -C 0.9 -D 0.05 -U 2.0 -M 1.0 -S -1.0 -c -1
Start
Stop
Result list (right-clic...
11:14:18 - Apriori
11:18:55 - Apriori
11:19:11 - Apriori
11:19:13 - Apriori
Associator output
=== Run information ===
Scheme: weka.associations.Apriori -I -N 10 -T 0 -C 0.9 -D 0.05 -U 2.0 -M 1.0 -S -1.0 -c -1
Relation: 2015-weka.filters.unsupervised.attribute.Remove-R2-4,6,14
Instances: 2664
Attributes: 10
Reference Number
Accident Date
1st Road Class
Road Surface
Lighting Conditions
Weather Conditions
Casualty Class
Casualty Severity
Sex of Casualty
Type of Vehicle
=== Associator model (full training set) ===
No large itemsets and rules found!

USING R-TOOL:


> a=apriori(data,parameter = list(sup=0.3,conf=0.9))
Apriori
Parameter specification:
confidence minval smax arem aval originalSupport maxtime support minlen maxlen
0.9 0.1 1 none FALSE TRUE 5 0.3 1 10
target ext
rules FALSE
Algorithmic control:
filter tree heap memopt load sort verbose
0.1 TRUE TRUE FALSE TRUE 2 TRUE
Absolute minimum support count: 799
set item appearances ...[0 item(s)] done [0.00s].
set transactions ...[2393 item(s), 2664 transaction(s)] done [0.00s].
sorting and recoding items ... [10 item(s)] done [0.00s].
creating transaction tree ... done [0.02s].
checking subsets of size 1 2 3 4 5 done [0.00s].
writing ... [30 rule(s)] done [0.00s].
creating S4 object ... done [0.00s].
>