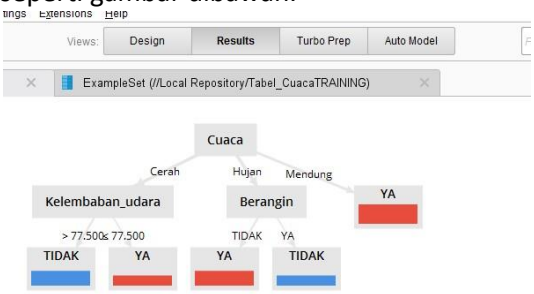
Nama : Tio Septiadi Murbiantoro

NIM : L200170099/ D

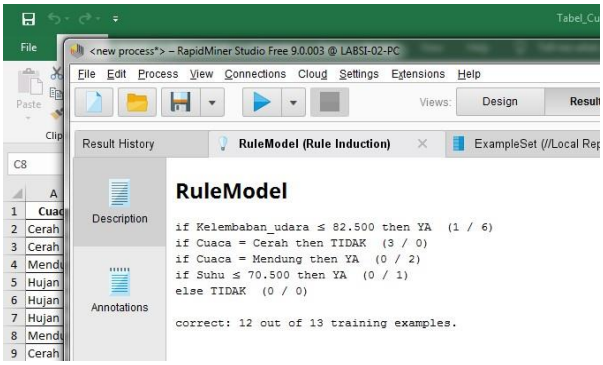
A. Kegiatan praktikum

1. Induksi Aturan Data Cuaca

   a. Menggunakan proses dari praktikum modul 9 dan menghasilkan sebuah pohon keputusan seperti gambar dibawah.

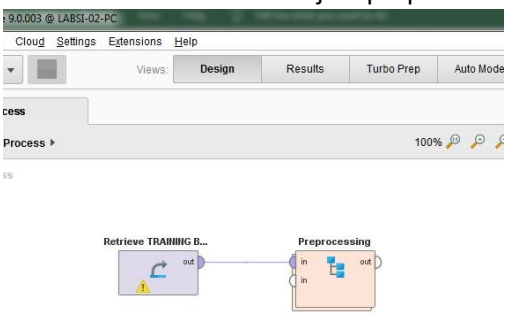


   b. Mengubah parameter sehingga menghasilkan sebuah induksi aturan dari data training yang disebut sebagai Rule Model

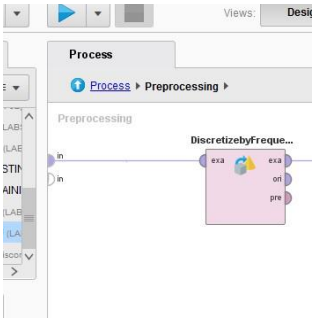


2. Aturan Asosiasi Data Cuaca

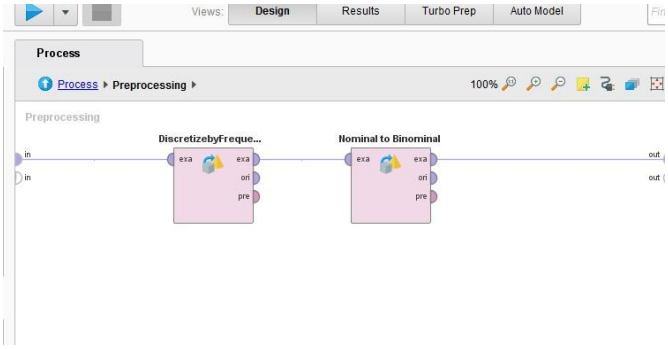
   a. Menggunakan DataCuaca_Training dan menggunakan parameter subprocess ke dalam area. Lalu ubah nama menjadi preprocessing.



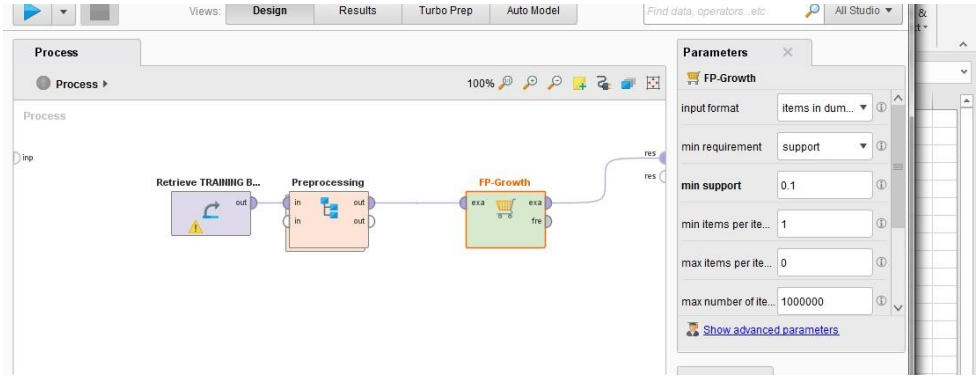
b. Klik ganda pada operator preprocesing sehingga masuk pada nested chain. Lalu rename menjadi “DiscretizebyFrequency” dan biarkan nilai parameter number of bins = 2.



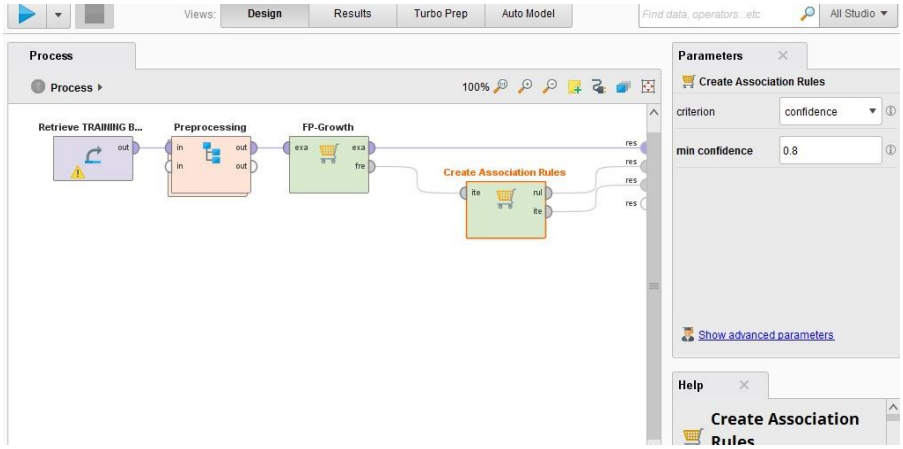
c. Mengubah nama operator menjadi “Nominal2Binomial” dan menghubungkan operator sebelumnya dengan masukan examination pada operator ini dengan panel out.



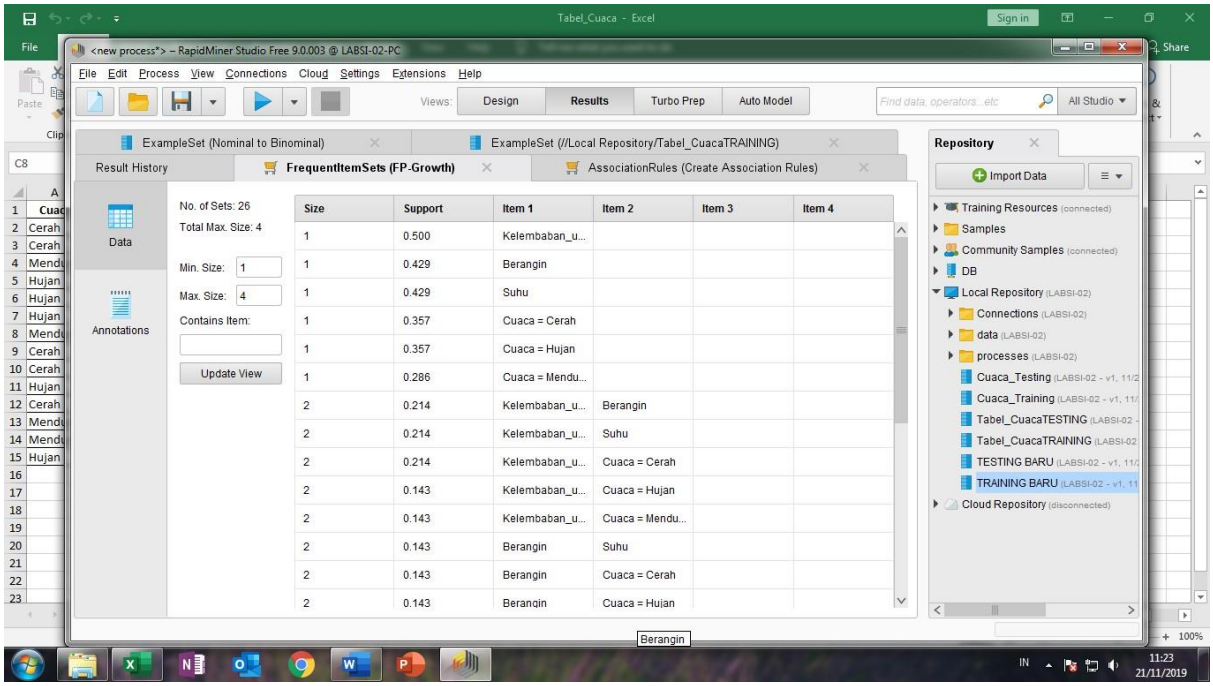
d. Tambahkan parameter Fp-Growth dan ubah parameter pada min support = 0,1 dan hubungkan pada port.



e. Tambahkan parameter Create Association Rules dan menghubungkan operator-operator tersebut.

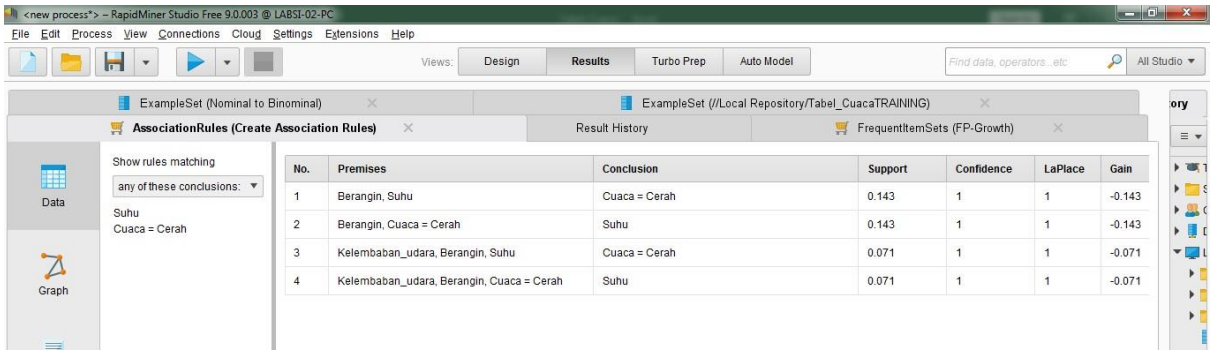


f. Dapat dilihat hasil-hasil aturan asosiasi sebagai berikut.

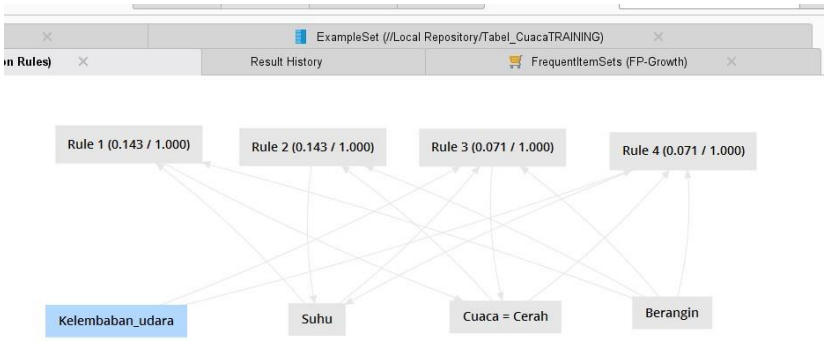


Dapat dilihat bahwa jumlah aturan asosisasi yang terbentuk adalah 23 set dan jumlah total maximal size = 4 yang terdiri dari 4 buah itemset.

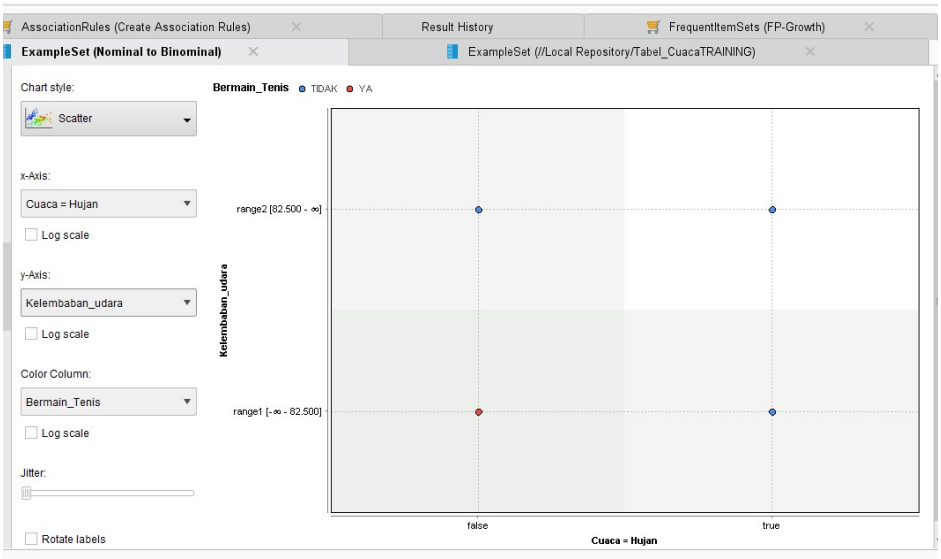
- Table views



- Graph views

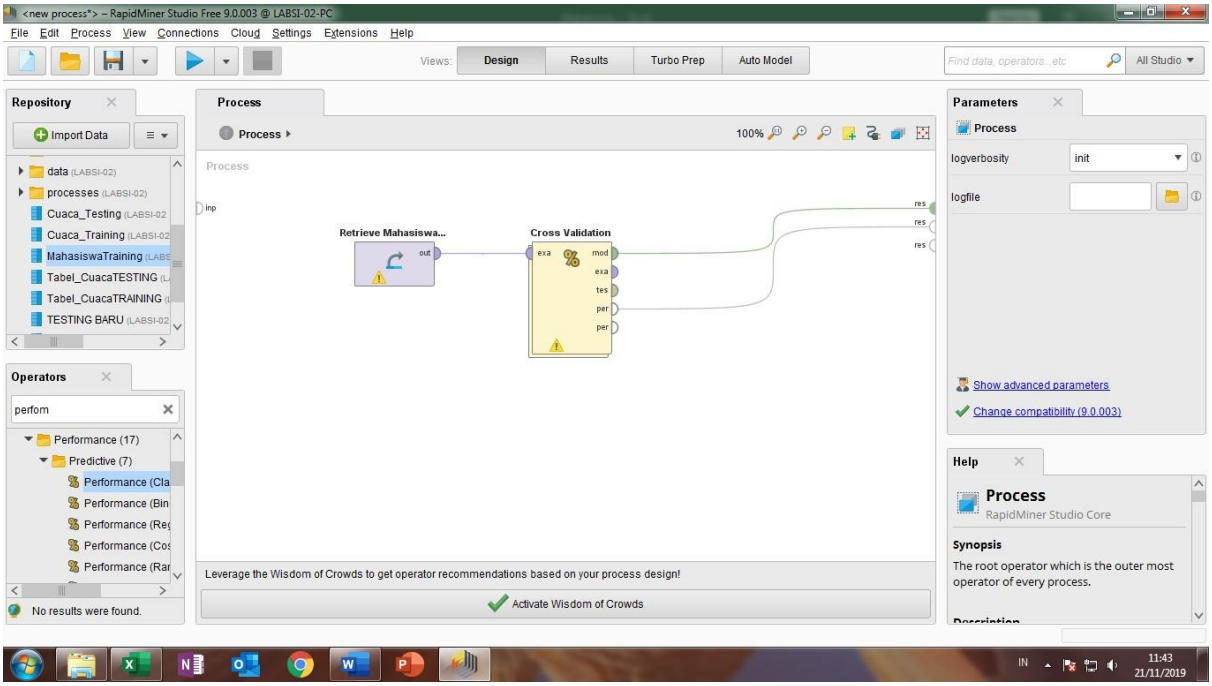


- ExampleSet

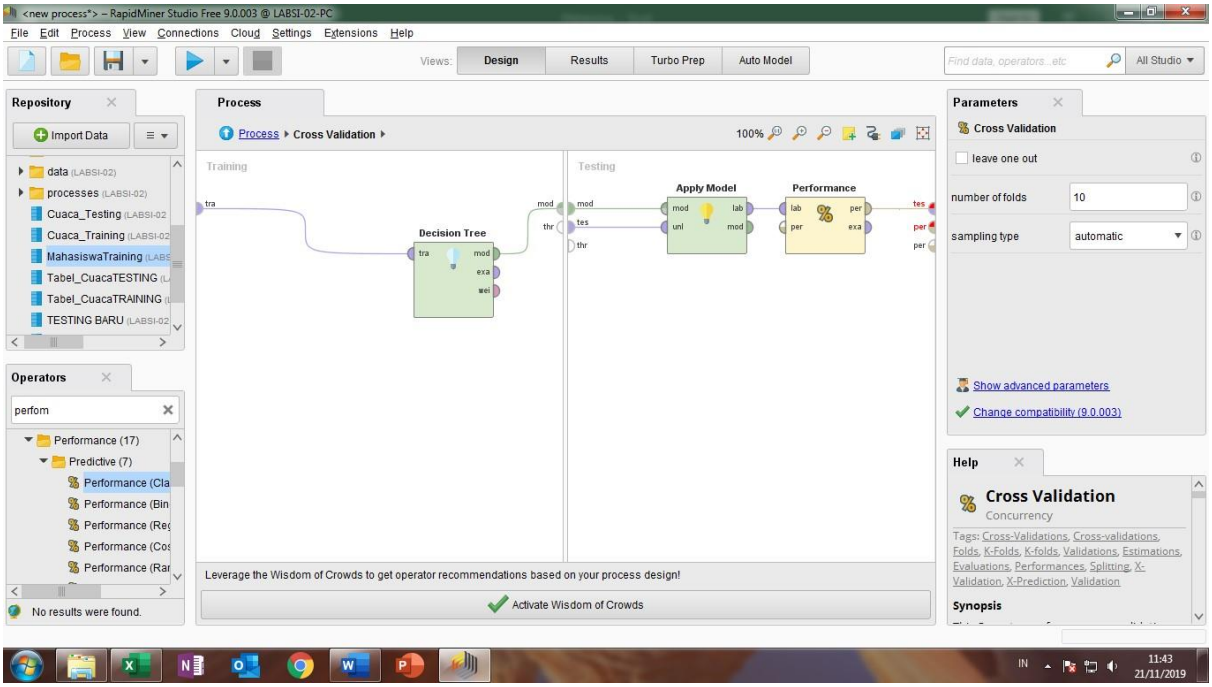


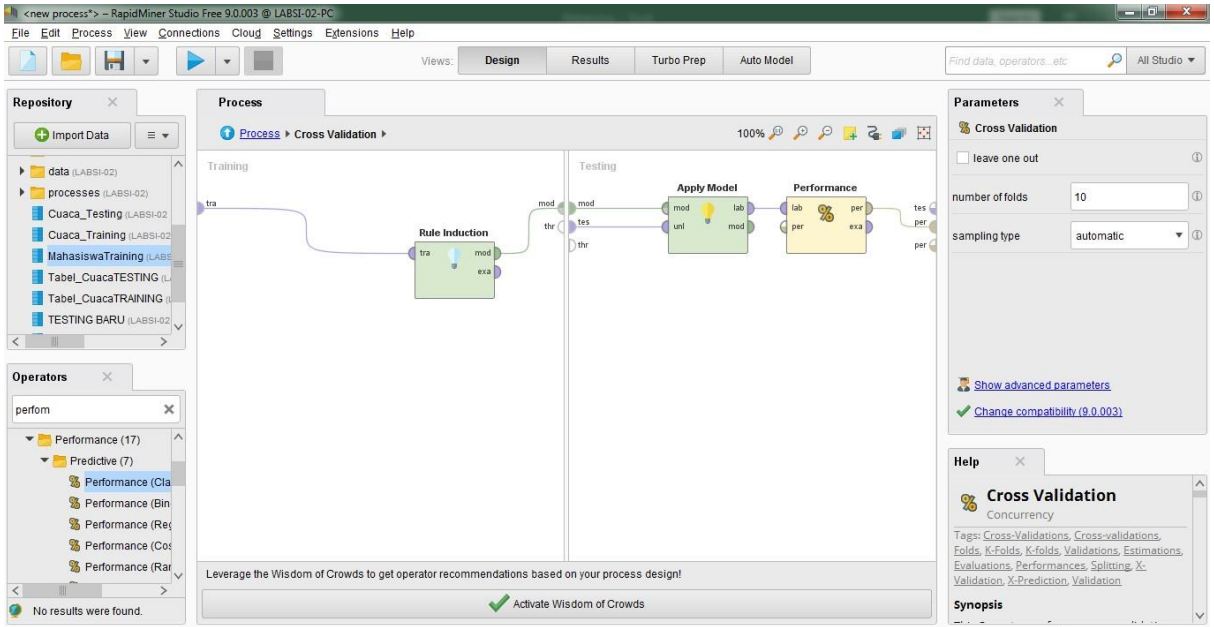
B. Tugas Praktikum

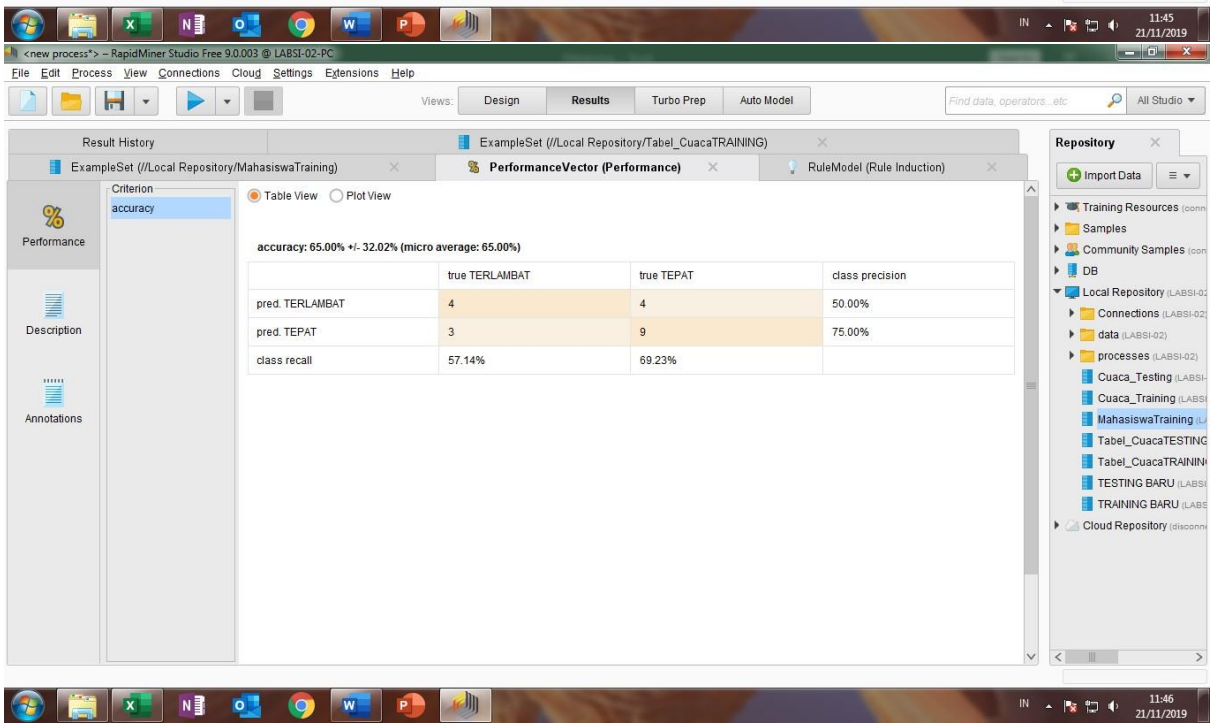
a. Membuat operator dengan menggunakan decision tree.



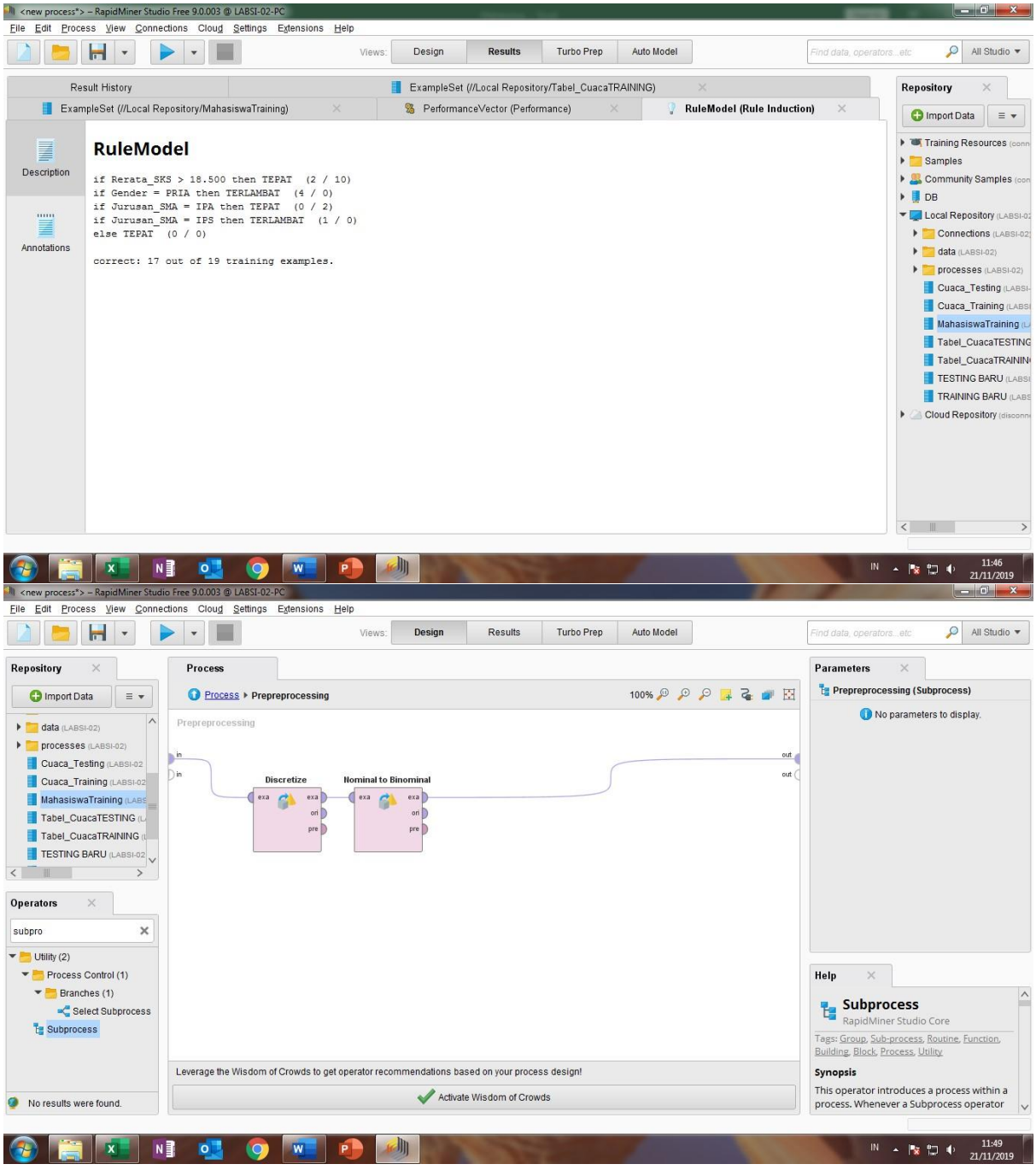
b. Lalu klik ganda pada decision tree dan klik ganda pada operator tersebut.

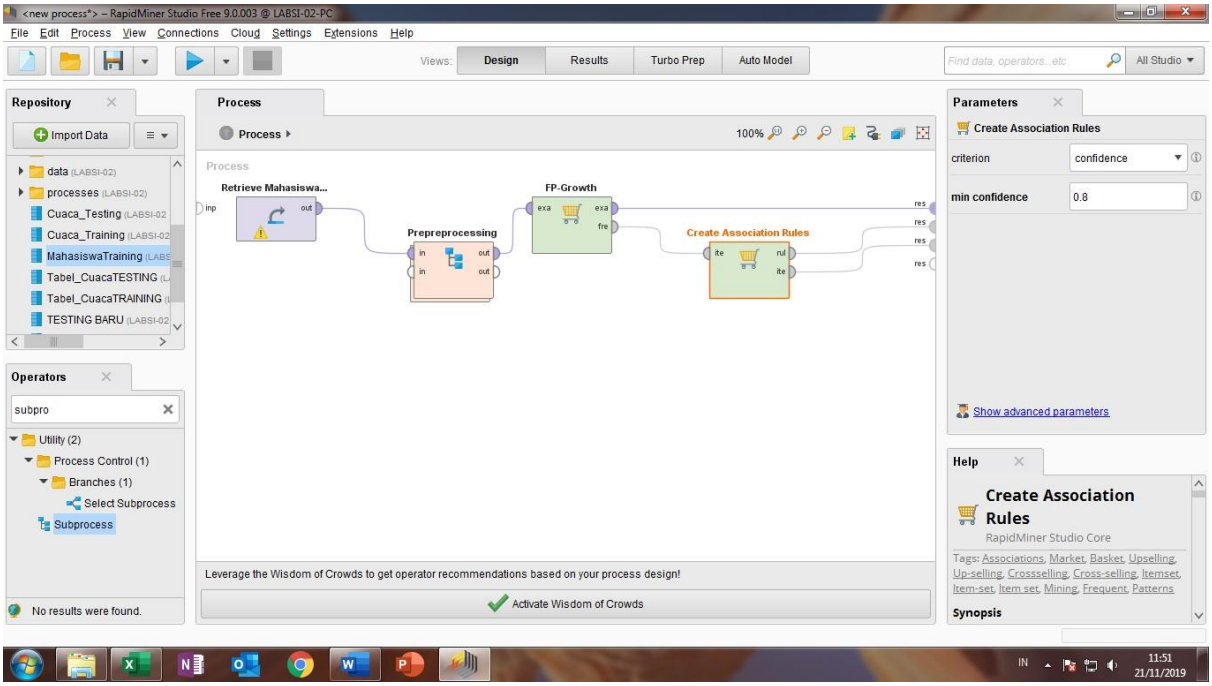



<new process*> – RapidMiner Studio Free 9.0.003 @ LABSI-02-PC
File Edit Process View Connections Cloud Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Repository
Import Data
Process
Process ▸ Cross Validation ▸
Training
Testing
Rule Induction
Apply Model
Performance
Parameters
Cross Validation
leave one out
number of folds 10
sampling type automatic
Show advanced parameters
Change compatibility (9.0.003)
Operators
perfom
Performance (17)
Predictive (7)
No results were found.
Help
Cross Validation
Concurrency
Leverage the Wisdom of Crowds to get operator recommendations based on your process design!
Activate Wisdom of Crowds

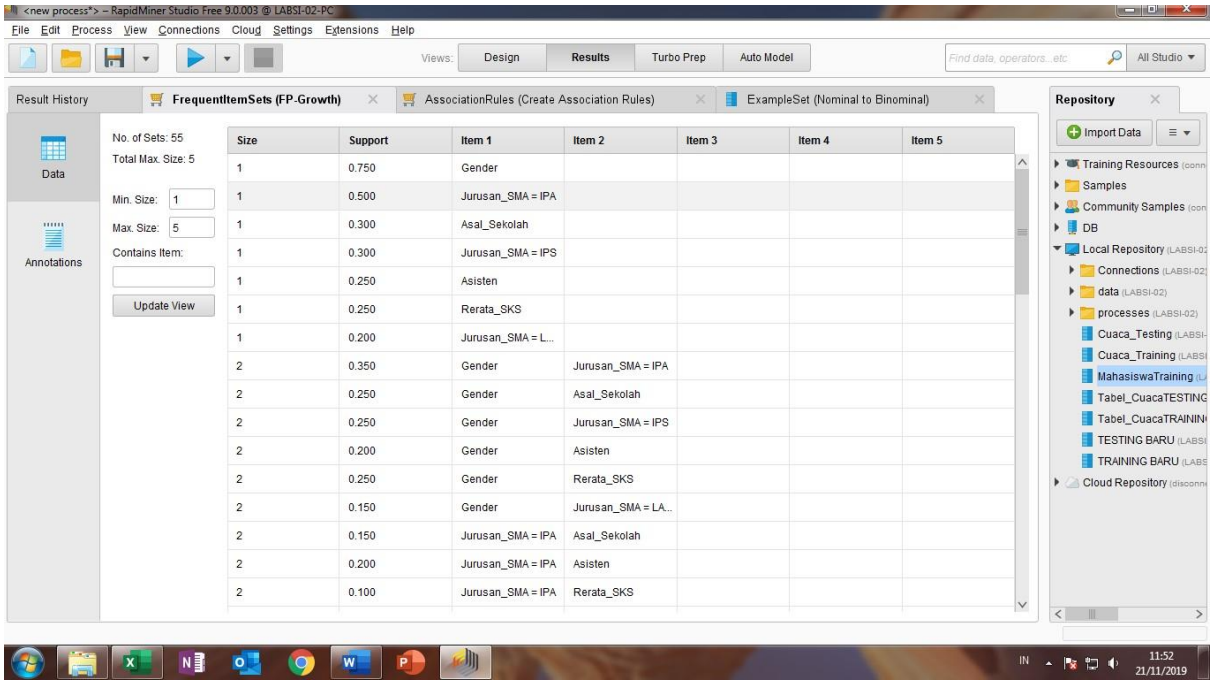

<new process*> – RapidMiner Studio Free 9.0.003 @ LABSI-02-PC
File Edit Process View Connections Cloud Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Result History
ExampleSet (//Local Repository/Tabel_CuacaTRAINING)
ExampleSet (//Local Repository/MahasiswaTraining)
PerformanceVector (Performance)
RuleModel (Rule Induction)
Performance
Description
Annotations
Criterion
accuracy
Table View
Plot View
accuracy: 65.00% +/- 32.02% (micro average: 65.00%)
true TERLAMBAT
true TEPAT
class precision
pred. TERLAMBAT 4 4 50.00%
pred. TEPAT 3 9 75.00%
class recall 57.14% 69.23%
Repository
Import Data

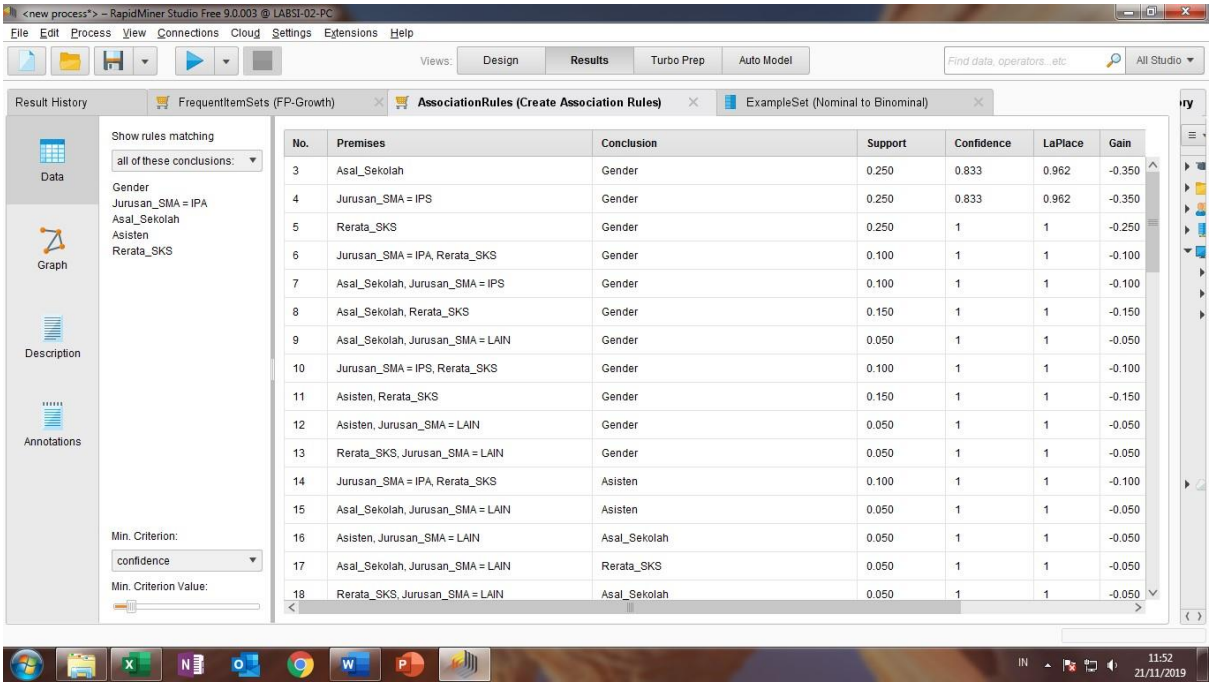
- Rule Model


<new process*> – RapidMiner Studio Free 9.0.003 @ LABSI-02-PC
File Edit Process View Connections Cloud Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc
All Studio
Result History
ExampleSet (//Local Repository/Tabel_CuacaTRAINING)
ExampleSet (//Local Repository/MahasiswaTraining)
PerformanceVector (Performance)
RuleModel (Rule Induction)
Description
Annotations
RuleModel
if Rerata_SKS > 18.500 then TEPAT (2 / 10)
if Gender = PRIA then TERLAMBAT (4 / 0)
if Jurusan_SMA = IPA then TEPAT (0 / 2)
if Jurusan_SMA = IPS then TERLAMBAT (1 / 0)
else TEPAT (0 / 0)
correct: 17 out of 19 training examples.
Repository
Import Data
Training Resources
Samples
Community Samples
DB
Local Repository
Connections
data
processes
Cuaca_Testing
Cuaca_Training
MahasiswaTraining
Tabel_CuacaTESTING
Tabel_CuacaTRAININ
TESTING BARU
TRAINING BARU
Cloud Repository
11:46
21/11/2019
<new process*> – RapidMiner Studio Free 9.0.003 @ LABSI-02-PC
File Edit Process View Connections Cloud Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc
All Studio
Repository
Import Data
data
processes
Cuaca_Testing
Cuaca_Training
MahasiswaTraining
Tabel_CuacaTESTING
Tabel_CuacaTRAINING
TESTING BARU
Operators
subpro
Utility (2)
Process Control (1)
Branches (1)
Select Subprocess
Subprocess
No results were found.
Process
Process
Prepreprocessing
100%
Prepreprocessing
in
in
Discretize
exa
exa
ori
pre
Nominal to Binominal
exa
exa
ori
pre
out
out
Leverage the Wisdom of Crowds to get operator recommendations based on your process design!
Activate Wisdom of Crowds
Parameters
Prepreprocessing (Subprocess)
No parameters to display.
Help
Subprocess
RapidMiner Studio Core
Tags: Group, Sub-process, Routine, Function, Building, Block, Process, Utility
Synopsis
This operator introduces a process within a process. Whenever a Subprocess operator
11:49
21/11/2019

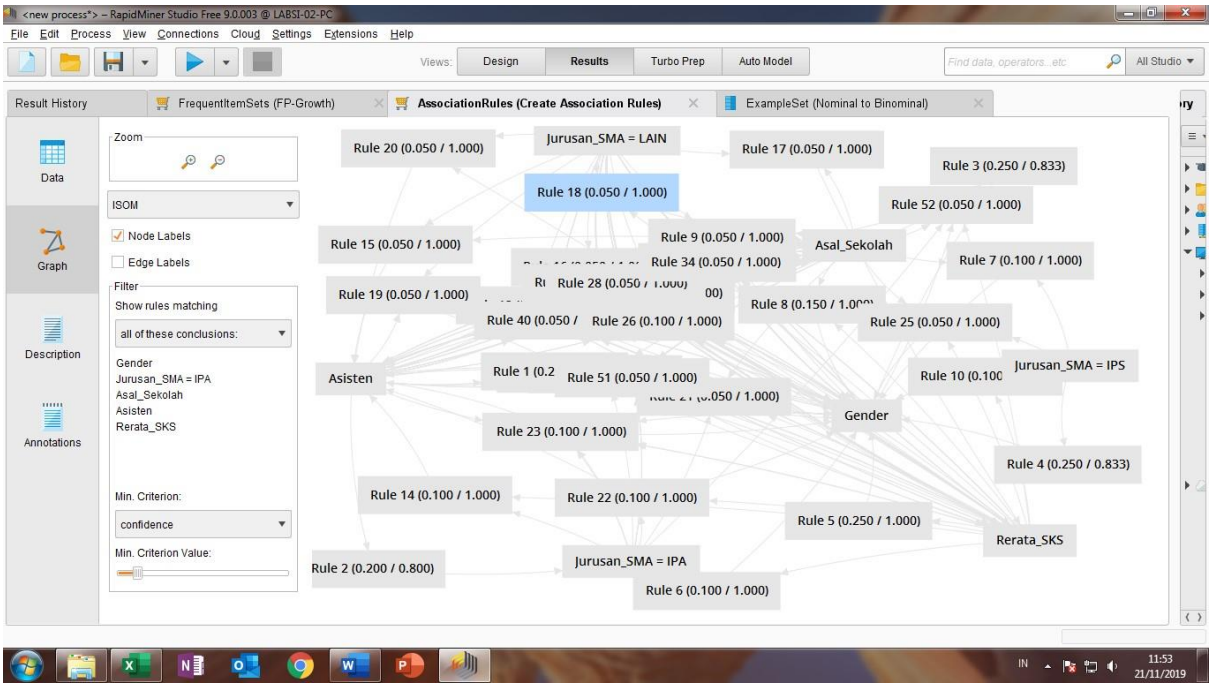

<new process*> – RapidMiner Studio Free 9.0.003 @ LABSI-02-PC
File Edit Process View Connections Cloud Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Repository
Import Data
Process
Retrieve Mahasiswa...
Prepreprocessing
FP-Growth
Create Association Rules
Parameters
Create Association Rules
criterion
confidence
min confidence
0.8
Show advanced parameters
Operators
subpro
Utility (2)
Process Control (1)
Branches (1)
Select Subprocess
Subprocess
No results were found.
Leverage the Wisdom of Crowds to get operator recommendations based on your process design!
Activate Wisdom of Crowds
Help
Create Association Rules
RapidMiner Studio Core
Synopsis

- Table Views

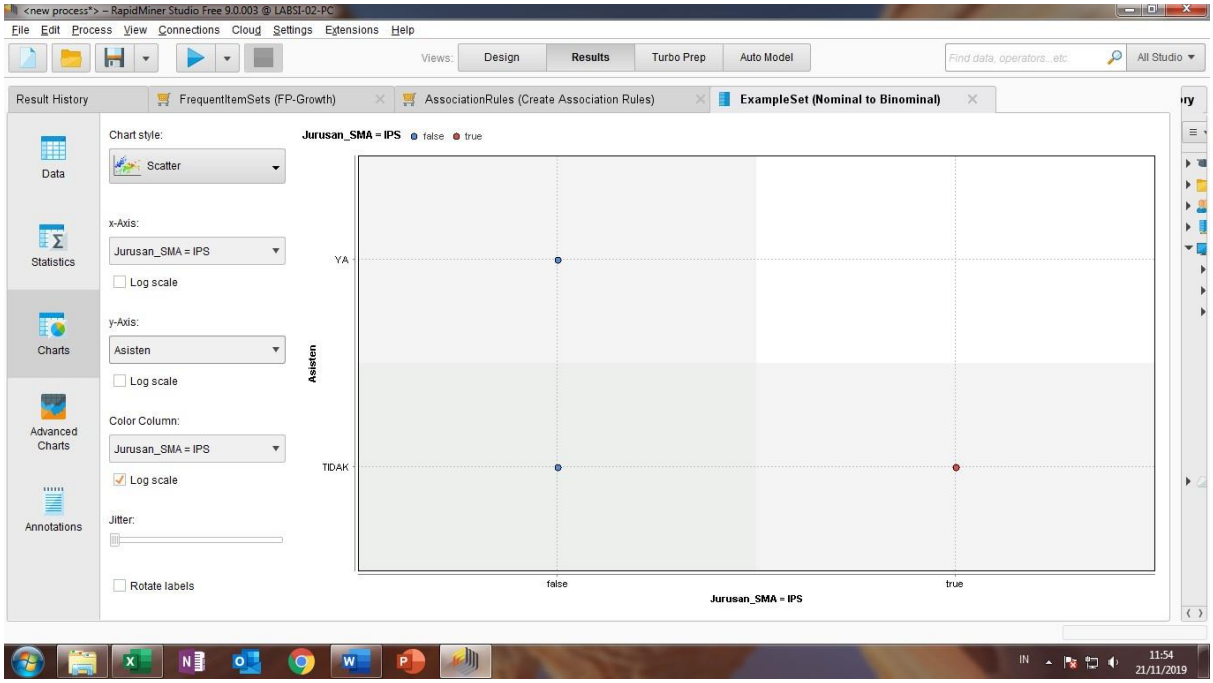

Result History
FrequentItemSets (FP-Growth)
AssociationRules (Create Association Rules)
ExampleSet (Nominal to Binominal)
No. of Sets: 55
Total Max. Size: 5
Min. Size: 1
Max. Size: 5
Contains Item:
Update View
Data
Annotations
Size Support Item 1 Item 2 Item 3 Item 4 Item 5
1 0.750 Gender
1 0.500 Jurusan_SMA = IPA
1 0.300 Asal_Sekolah
1 0.300 Jurusan_SMA = IPS
1 0.250 Asisten
1 0.250 Rerata_SKS
1 0.200 Jurusan_SMA = L...
2 0.350 Gender Jurusan_SMA = IPA
2 0.250 Gender Asal_Sekolah
2 0.250 Gender Jurusan_SMA = IPS
2 0.200 Gender Asisten
2 0.250 Gender Rerata_SKS
2 0.150 Gender Jurusan_SMA = LA...
2 0.150 Jurusan_SMA = IPA Asal_Sekolah
2 0.200 Jurusan_SMA = IPA Asisten
2 0.100 Jurusan_SMA = IPA Rerata_SKS
Repository
Import Data
Training Resources
Samples
Community Samples
DB
Local Repository
Connections
data
processes
Cuaca_Testing
Cuaca_Training
MahasiswaTraining
Tabel_CuacaTESTING
TESTING BARU
TRAINING BARU
Cloud Repository


<new process*> – RapidMiner Studio Free 9.0.003 @ LABSI-02-PC
File Edit Process View Connections Cloud Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc
All Studio
Result History
FrequentItemSets (FP-Growth)
AssociationRules (Create Association Rules)
ExampleSet (Nominal to Binominal)
Data
Graph
Description
Annotations
Show rules matching
all of these conclusions:
Gender
Jurusan_SMA = IPA
Asal_Sekolah
Asisten
Rerata_SKS
Min. Criterion:
confidence
Min. Criterion Value:
No. Premises Conclusion Support Confidence LaPlace Gain
3 Asal_Sekolah Gender 0.250 0.833 0.962 -0.350
4 Jurusan_SMA = IPS Gender 0.250 0.833 0.962 -0.350
5 Rerata_SKS Gender 0.250 1 1 -0.250
6 Jurusan_SMA = IPA, Rerata_SKS Gender 0.100 1 1 -0.100
7 Asal_Sekolah, Jurusan_SMA = IPS Gender 0.100 1 1 -0.100
8 Asal_Sekolah, Rerata_SKS Gender 0.150 1 1 -0.150
9 Asal_Sekolah, Jurusan_SMA = LAIN Gender 0.050 1 1 -0.050
10 Jurusan_SMA = IPS, Rerata_SKS Gender 0.100 1 1 -0.100
11 Asisten, Rerata_SKS Gender 0.150 1 1 -0.150
12 Asisten, Jurusan_SMA = LAIN Gender 0.050 1 1 -0.050
13 Rerata_SKS, Jurusan_SMA = LAIN Gender 0.050 1 1 -0.050
14 Jurusan_SMA = IPA, Rerata_SKS Asisten 0.100 1 1 -0.100
15 Asal_Sekolah, Jurusan_SMA = LAIN Asisten 0.050 1 1 -0.050
16 Asisten, Jurusan_SMA = LAIN Asal_Sekolah 0.050 1 1 -0.050
17 Asal_Sekolah, Jurusan_SMA = LAIN Rerata_SKS 0.050 1 1 -0.050
18 Rerata_SKS, Jurusan_SMA = LAIN Asal_Sekolah 0.050 1 1 -0.050
IN 11:52 21/11/2019

- Graph View


<new process*> – RapidMiner Studio Free 9.0.003 @ LABSI-02-PC
File Edit Process View Connections Cloud Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc
All Studio
Result History
FrequentItemSets (FP-Growth)
AssociationRules (Create Association Rules)
ExampleSet (Nominal to Binominal)
Data
Graph
Description
Annotations
Zoom
ISOM
Node Labels
Edge Labels
Filter
Show rules matching
all of these conclusions:
Gender
Jurusan_SMA = IPA
Asal_Sekolah
Asisten
Rerata_SKS
Min. Criterion:
confidence
Min. Criterion Value:
Rule 20 (0.050 / 1.000)
Jurusan_SMA = LAIN
Rule 17 (0.050 / 1.000)
Rule 3 (0.250 / 0.833)
Rule 18 (0.050 / 1.000)
Rule 52 (0.050 / 1.000)
Rule 15 (0.050 / 1.000)
Rule 9 (0.050 / 1.000)
Asal_Sekolah
Rule 34 (0.050 / 1.000)
Rule 7 (0.100 / 1.000)
Rule 19 (0.050 / 1.000)
Rule 8 (0.150 / 1.000)
Rule 40 (0.050 /
Rule 26 (0.100 / 1.000)
Rule 25 (0.050 / 1.000)
Asisten
Rule 1 (0.2
Rule 51 (0.050 / 1.000)
Rule 10 (0.100
Jurusan_SMA = IPS
Gender
Rule 23 (0.100 / 1.000)
Rule 4 (0.250 / 0.833)
Rule 14 (0.100 / 1.000)
Rule 22 (0.100 / 1.000)
Rule 5 (0.250 / 1.000)
Rerata_SKS
Rule 2 (0.200 / 0.800)
Jurusan_SMA = IPA
Rule 6 (0.100 / 1.000)
IN 11:53 21/11/2019

- Example Set


<new process*> – RapidMiner Studio Free 9.0.003 @ LABSI-02-PC
File Edit Process View Connections Cloud Settings Extensions Help
Views: Design Results Turbo Prep Auto Model
Find data, operators...etc.
All Studio
Result History
FrequentItemSets (FP-Growth)
AssociationRules (Create Association Rules)
ExampleSet (Nominal to Binominal)
Data
Statistics
Charts
Advanced Charts
Annotations
Chart style:
Scatter
x-Axis:
Jurusan_SMA = IPS
Log scale
y-Axis:
Asisten
Log scale
Color Column:
Jurusan_SMA = IPS
Log scale
Jitter:
Rotate labels
Jurusan_SMA = IPS false true
YA
TIDAK
Asisten
false
true
Jurusan_SMA = IPS
IN
11:54
21/11/2019