

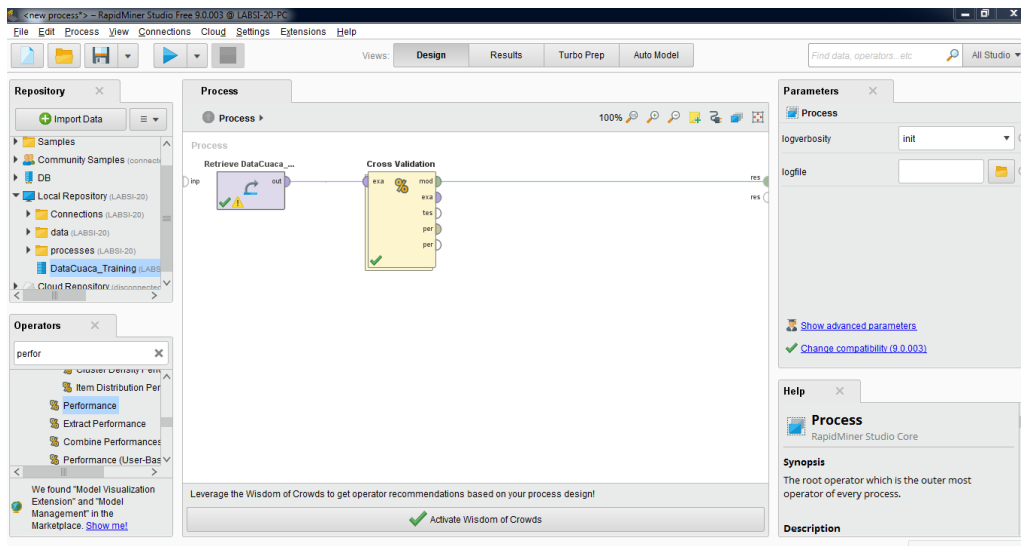
Nama: Rifqi Wirawan

NIM: L200170141

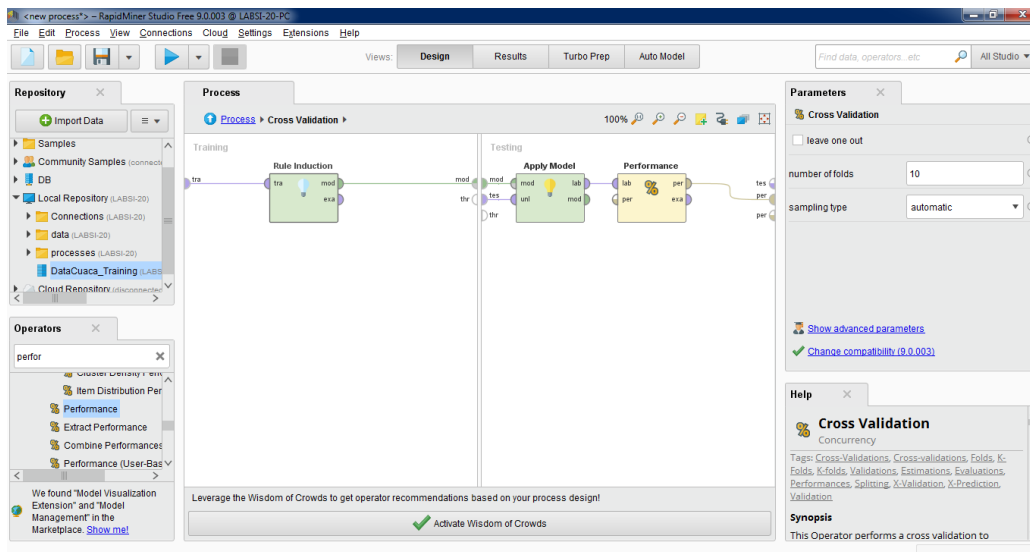
Modul: 11

Percobaan (Induksi aturan data cuaca)

Buat pada bagian proses area dengan memasukkan DataCuaca_Training kemudian beri operator Cross Validation



Kemudian buka pada Cross Validation dan tambahkan operator rule induction, apply model dan performance



Kemudian run pada process itu dan akan menunjukkan hasil sebagai berikut

The screenshot shows the RapidMiner Studio interface with the 'RuleModel (Rule Induction)' process selected. The 'Results' tab is active, displaying the generated rules and their performance.

RuleModel

Description

```
if Kelembaban_udara ≤ 82.500 then YA (1 / 6)
if Cuaca = Cerah then TIDAK (3 / 0)
if Cuaca = Mendung then YA (0 / 2)
if Suhu ≤ 70.500 then YA (0 / 1)
else TIDAK (0 / 0)
```

Annotations

correct: 12 out of 13 training examples.

Repository

- Training Resources (connected)
- Samples
- Community Samples (connected)
- DB
- Local Repository (LABSI-20)
 - Connections (LABSI-20)
 - data (LABSI-20)
 - processes (LABSI-20)
 - DataCuaca_Training (LABSI-20 - v1, 11/2)
- Cloud Repository (disconnected)

The screenshot shows the RapidMiner Studio interface with the 'PerformanceVector (Performance)' process selected. The 'Results' tab is active, displaying a table of performance metrics.

PerformanceVector (Performance)

Table View Plot View

accuracy: 65.00% +/- 45.00% (micro average: 71.43%)

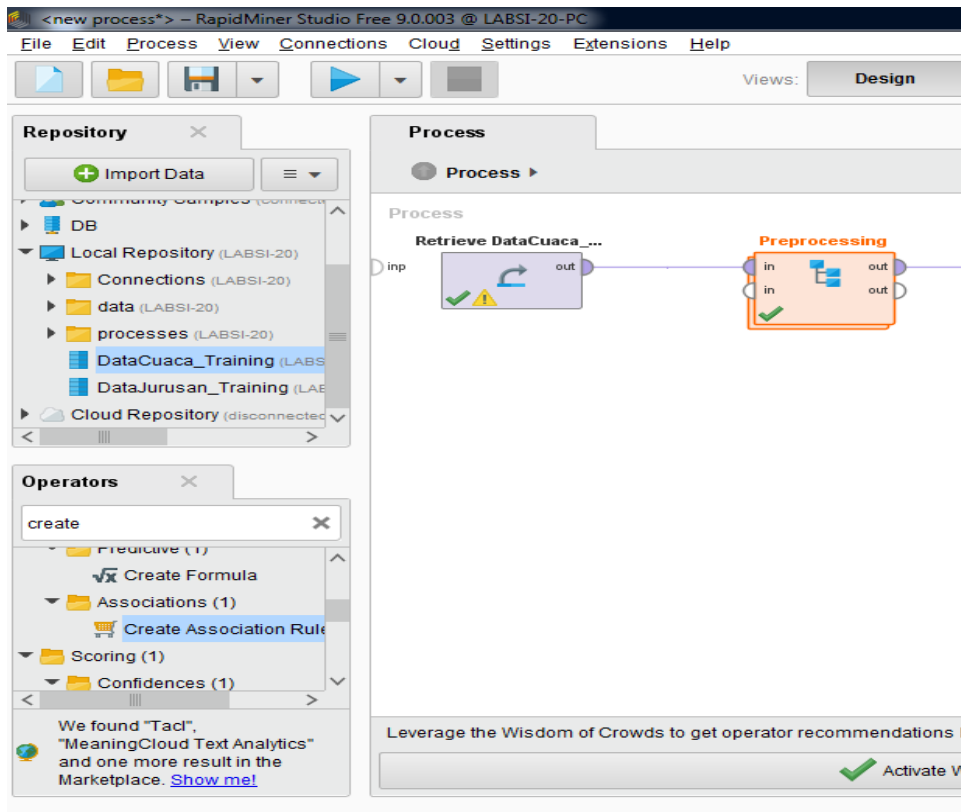
	true TIDAK	true YA	class precision
pred. TIDAK	2	1	66.67%
pred. YA	3	8	72.73%
class recall	40.00%	88.89%	

Repository

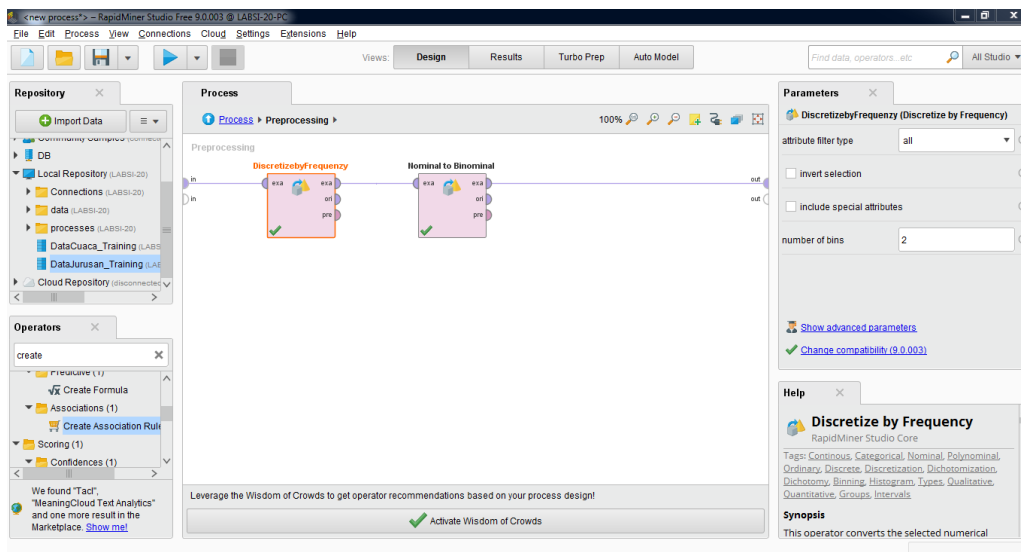
- Training Resources (connected)
- Samples
- Community Samples (connected)
- DB
- Local Repository (LABSI-20)
 - Connections (LABSI-20)
 - data (LABSI-20)
 - processes (LABSI-20)
 - DataCuaca_Training (LABSI-20 - v1, 11/2)
- Cloud Repository (disconnected)

Percobaan (Aturan asosiasi data cuaca)

Gunakan kembali DataCuaca_Training dan tambahkan operator pada proses area dengan operator Subprocess



Kemudian tambahkan operator pada bagian Preprocessing dengan klik operator tersebut dan tambahkan operator didalamnya dengan DiscretizebyFrequency (ganti number of bins dengan angka 2, Nominal to Binominal)



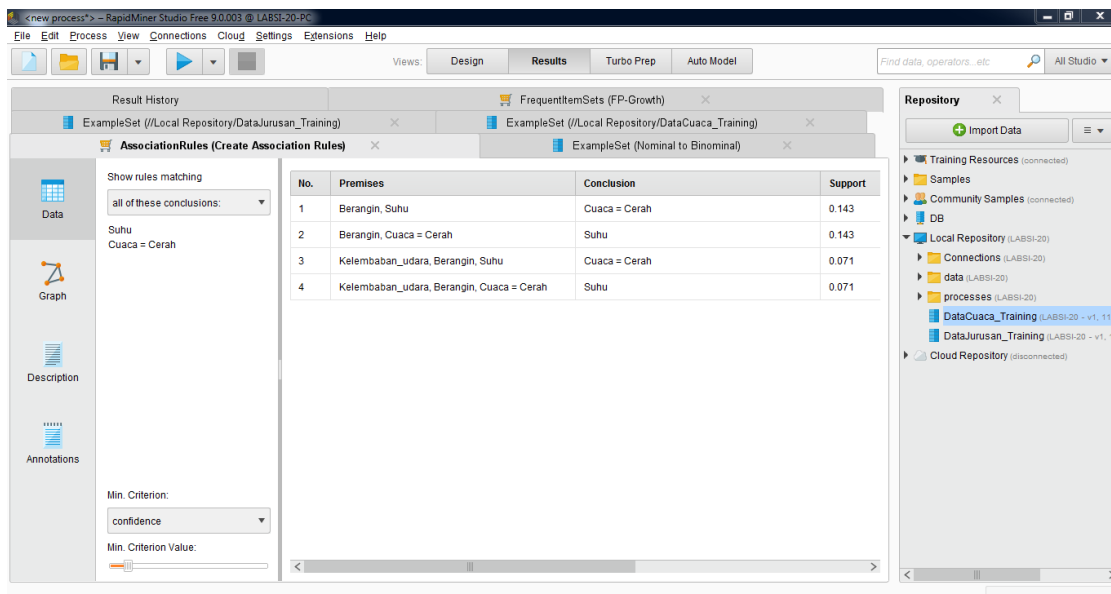
Setelah itu ke menu utama dan tambahkan operator FP-Growth(min support diganti 0.1) , Create Association Rules

The screenshot shows the RapidMiner Studio interface. The main workspace displays a process flow: **Retrieve DataCuaca_...** → **Preprocessing** → **FP-Growth** → **Create Association Rules**. The **Parameters** panel for the **FP-Growth** operator is visible, showing settings for input format, min requirement, min support (0.1), min items per itemset (1), max items per itemset (0), and max number of itemsets (1000000). The **Help** panel provides a synopsis of the operator.

Hasil dari proses diatas

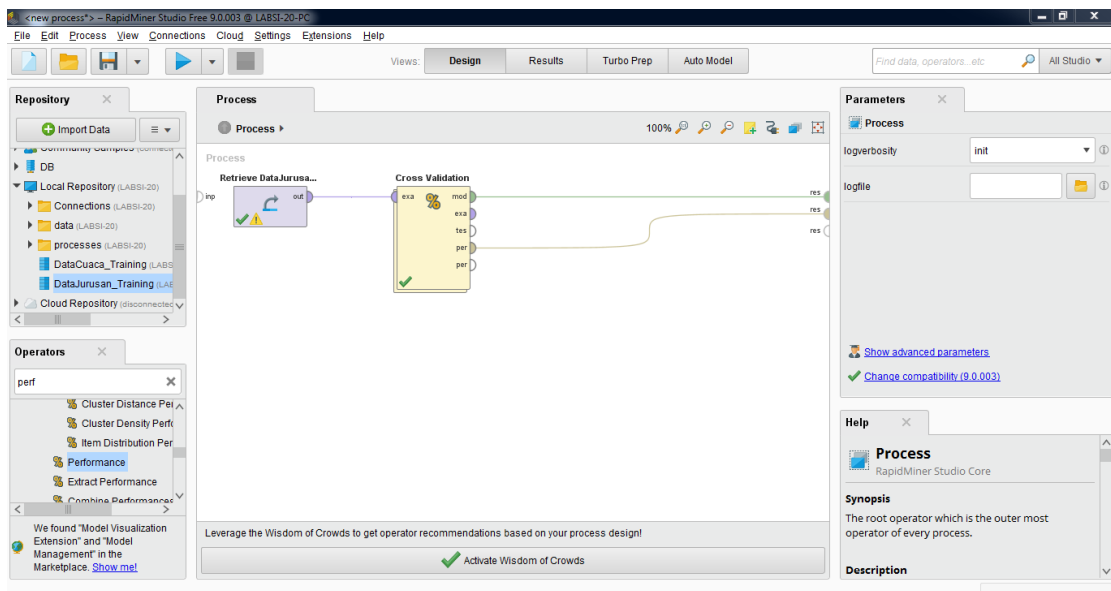
The screenshot shows the **Results** view of the RapidMiner Studio. The **FrequentItemSets (FP-Growth)** operator is selected, displaying a table of frequent itemsets. The table has columns for **No. of Sets**, **Total Max. Size**, **Size**, **Support**, and **Item 1** through **Item 4**.

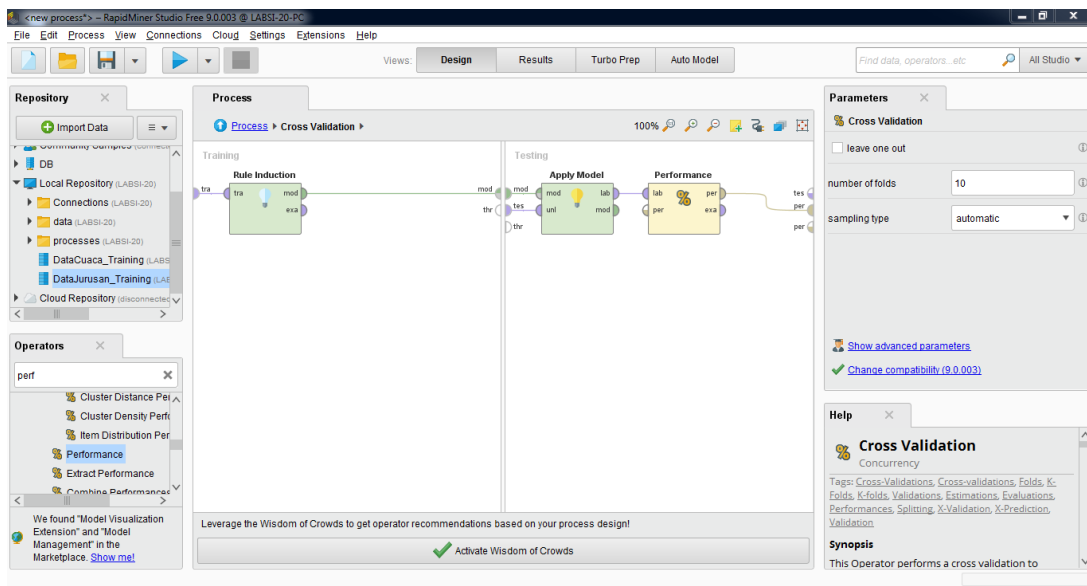
No. of Sets	Total Max. Size	Size	Support	Item 1	Item 2	Item 3	Item 4
1	4	1	0.500	Kelembaban_udara			
1	4	1	0.429	Berangin			
1	4	1	0.429	Suhu			
1	4	1	0.357	Cuaca = Cerah			
1	4	1	0.357	Cuaca = Hujan			
1	4	1	0.286	Cuaca = Mendung			
2	4	2	0.214	Kelembaban_udara	Berangin		
2	4	2	0.214	Kelembaban_udara	Suhu		
2	4	2	0.214	Kelembaban_udara	Cuaca = Cerah		
2	4	2	0.143	Kelembaban_udara	Cuaca = Hujan		
2	4	2	0.143	Kelembaban_udara	Cuaca = Mendung		
2	4	2	0.143	Berangin	Suhu		
2	4	2	0.143	Berangin	Cuaca = Cerah		
2	4	2	0.143	Berangin	Cuaca = Hujan		



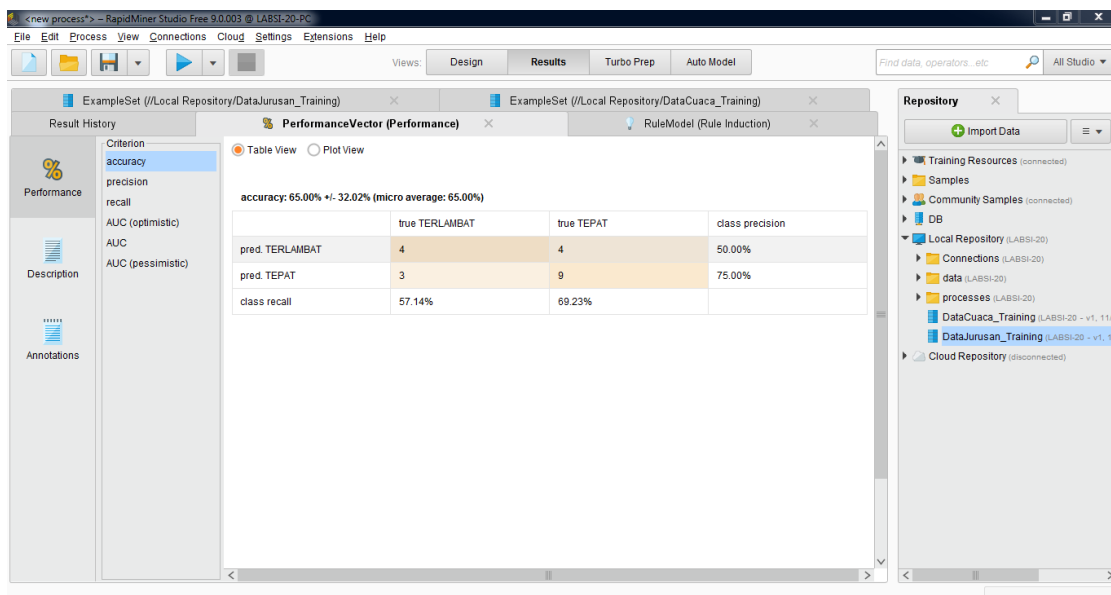
Tugas no 2

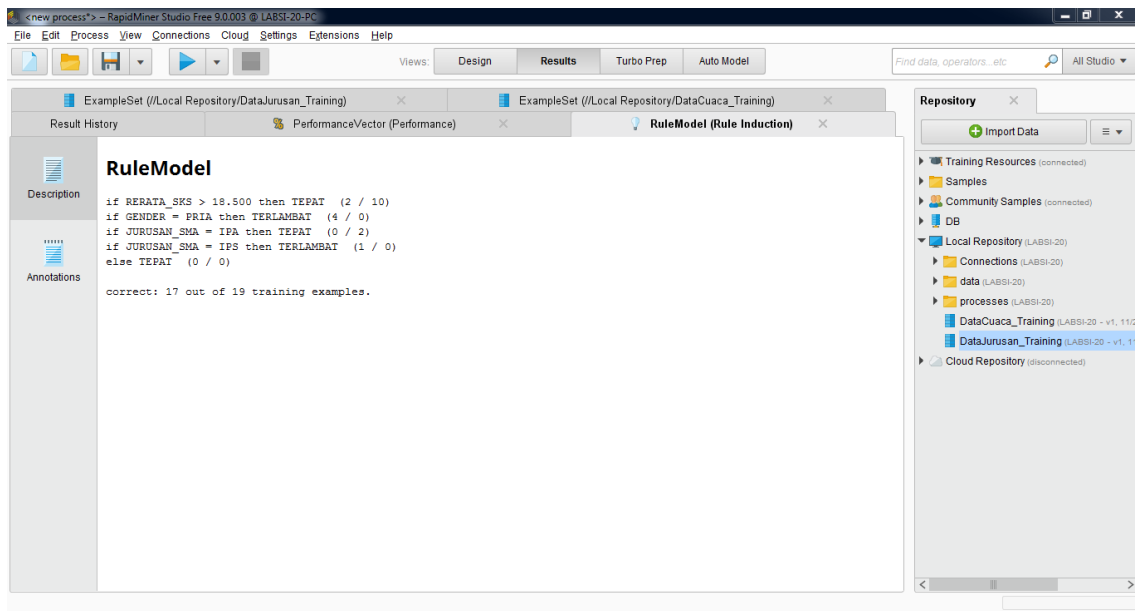
Dengan menggunakan DataJurusan_Training pada modul 6 dan buat pada bagian proses area dengan memasukkan DataJurusan_Training kemudian beri operator Cross Validation kemudian buka pada Cross Validation dan tambahkan operator rule induction, apply model dan performance



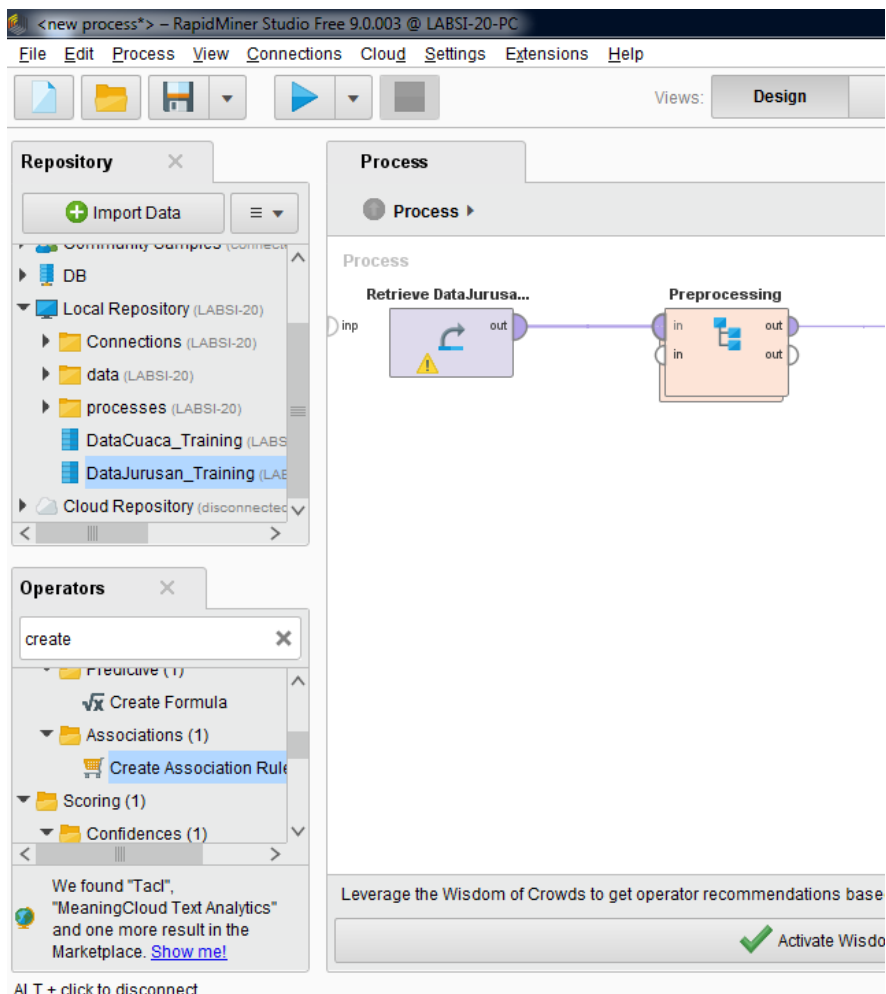


Hasil dari tugas no 1





Tugas no 2



new process* - RapidMiner Studio Free 9.0.003 @ LABSI-20-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

DB

Local Repository (LABSI-20)

Connections (LABSI-20)

data (LABSI-20)

processes (LABSI-20)

DataCuaca_Training (LABSI-20)

DataJurusan_Training (LABSI-20)

Cloud Repository (disconnected)

Operators

create

Recursive (1)

Create Formula

Associations (1)

Create Association Rule

Scoring (1)

Confidences (1)

We found "Tad", "MeaningCloud Text Analytics" and one more result in the Marketplace. [Show me!](#)

Process

Process

100%

Retrieve DataJurusan...

Preprocessing

FP-Growth

Create Association...

Parameters

FP-Growth

input format items in dummy cod...

min requirement support

min support 0.1

min items per itemset 1

max items per itemset 0

max number of itemsets 1000000

[Show advanced parameters](#)

Help

FP-Growth

Concurrency

Tags: Associations Market Basket Upselling Up-selling Crossselling Cross-selling Itemset Item-set Item set Mining Frequent Patterns

Synopsis

This Operator efficiently calculates all frequently-occurring itemsets in an ExampleSet, using the FP-

Leverage the Wisdom of Crowds to get operator recommendations based on your process design!

Activate Wisdom of Crowds

2A dengan number of bins = 2

new process* - RapidMiner Studio Free 9.0.003 @ LABSI-20-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

DB

Local Repository (LABSI-20)

Connections (LABSI-20)

data (LABSI-20)

processes (LABSI-20)

DataCuaca_Training (LABSI-20)

DataJurusan_Training (LABSI-20)

Cloud Repository (disconnected)

Operators

create

Recursive (1)

Create Formula

Associations (1)

Create Association Rule

Scoring (1)

Confidences (1)

We found "Tad", "MeaningCloud Text Analytics" and one more result in the Marketplace. [Show me!](#)

Process

Preprocessing

100%

DiscretizebyFrequency

Nominal to Binominal

Parameters

DiscretizebyFrequency (Discretize by Frequency)

attribute filter type all

invert selection

include special attributes

number of bins 2

[Show advanced parameters](#)

[Change compatibility \(0.003\)](#)

Help

Discretize by Frequency

RapidMiner Studio Core

Tags: Continuous, Categorical, Nominal, Polynomial, Ordinary, Discrete, Discretization, Dichotomization, Dichotomy, Binning, Histogram Types, Qualitative, Quantitative, Groups, Intervals

Synopsis

This operator converts the selected numerical

Leverage the Wisdom of Crowds to get operator recommendations based on your process design!

Activate Wisdom of Crowds

Hasilnya

No. of Sets	Total Max. Size	Min. Size	Max. Size	Contains Item	Item 1	Item 2	Item 3	Item 4	Item 5
1	5	1	5		GENDER				
1	5	1	5		JURUSAN_SMA...				
1	5	1	5		ASAL_SEKOLAH				
1	5	1	5		JURUSAN_SMA...				
1	5	1	5		ASISTEN				
1	5	1	5		RERATA_SKS				
1	5	1	5		JURUSAN_SMA...				
2	5	1	5		GENDER	JURUSAN_SMA...			
2	5	1	5		GENDER	ASAL_SEKOLAH			
2	5	1	5		GENDER	JURUSAN_SMA...			
2	5	1	5		GENDER	ASISTEN			
2	5	1	5		GENDER	RERATA_SKS			
2	5	1	5		GENDER	JURUSAN_SMA...			
2	5	1	5		JURUSAN_SMA...	ASAL_SEKOLAH			

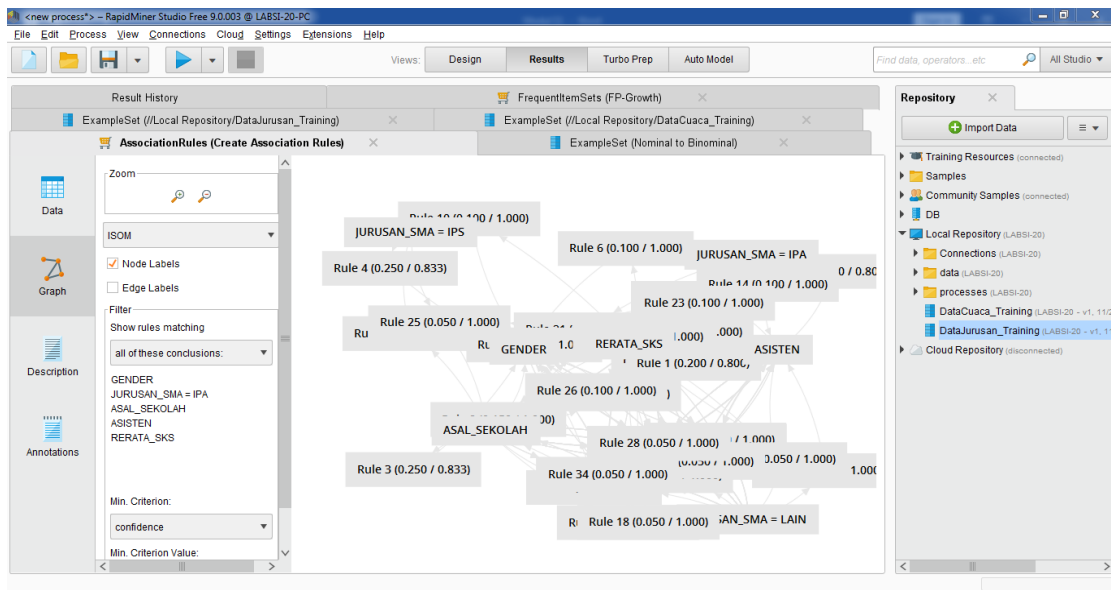
Jumlah set aturan asosiasi dan total max size yang terbentuk berdasarkan FP-Growth

No. of Sets: 55
Total Max. Size: 5

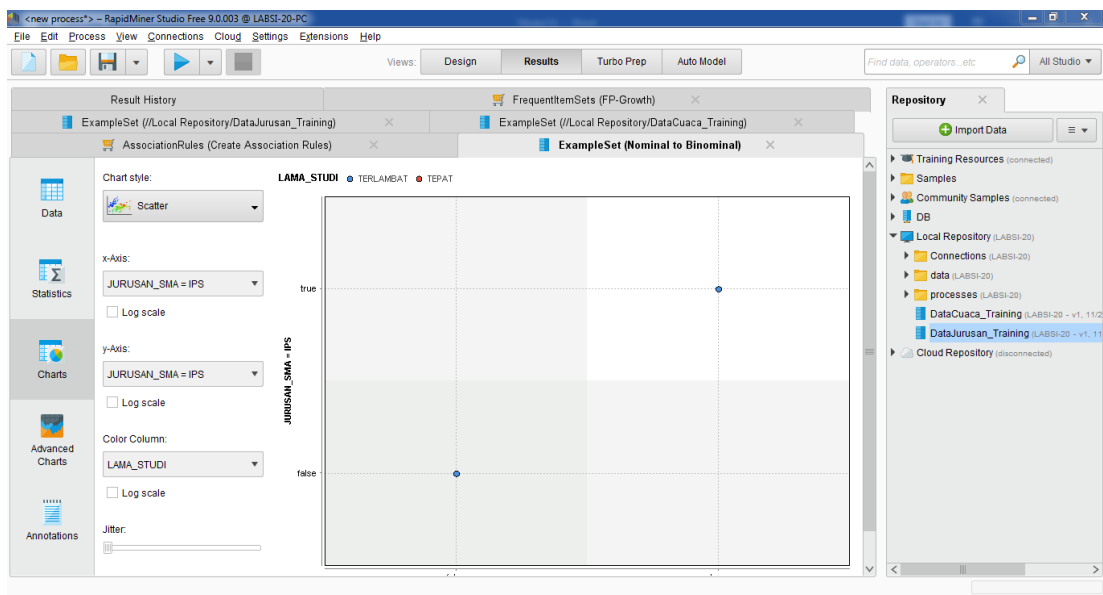
Min. Size:
Max. Size:
Contains Item:

Jumlah data pasangan premis dan kesimpulan pada Association Rules

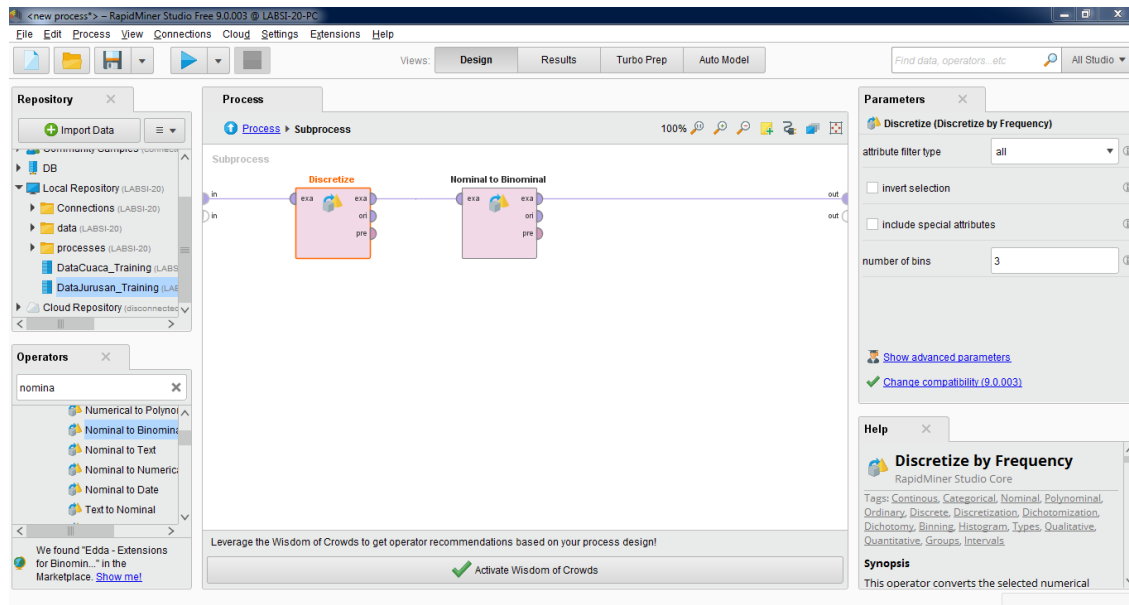
No.	Premises	Conclusion	Support
3	ASAL_SEKOLAH	GENDER	0.250
4	JURUSAN_SMA = IPS	GENDER	0.250
5	RERATA_SKS	GENDER	0.250
6	JURUSAN_SMA = IPA, RERATA_SKS	GENDER	0.100
7	ASAL_SEKOLAH, JURUSAN_SMA = IPS	GENDER	0.100
8	ASAL_SEKOLAH, RERATA_SKS	GENDER	0.150
9	ASAL_SEKOLAH, JURUSAN_SMA = LAIN	GENDER	0.050
10	JURUSAN_SMA = IPS, RERATA_SKS	GENDER	0.100
11	ASISTEN, RERATA_SKS	GENDER	0.150
12	ASISTEN, JURUSAN_SMA = LAIN	GENDER	0.050
13	RERATA_SKS, JURUSAN_SMA = LAIN	GENDER	0.050
14	JURUSAN_SMA = IPA, RERATA_SKS	ASISTEN	0.100
15	ASAL_SEKOLAH, JURUSAN_SMA = LAIN	ASISTEN	0.050
16	ASISTEN, JURUSAN_SMA = LAIN	ASAL_SEKOLAH	0.050



Grafik Chart pola distribusi data



2B dengan number of bins = 3



Hasilnya

The screenshot shows the 'Results' tab in RapidMiner Studio. The 'FrequentItemSets (FP-Growth)' operator output is displayed as a table. The table has columns for 'No. of Sets', 'Total Max. Size', 'Min. Size', 'Max. Size', 'Contains Item', and a list of items (Item 1 to Item 5). The table contains 10 rows of data, showing the results of the FP-Growth algorithm.

No. of Sets	Total Max. Size	Min. Size	Max. Size	Contains Item	Item 1	Item 2	Item 3	Item 4	Item 5
85	5	1	5		JURUSAN_SMA...	RERATA_SKS =...			
2	0.100	2	0.150	ASISTEN	RERATA_SKS =...				
2	0.050	2	0.050	ASISTEN	JURUSAN_SMA...				
2	0.050	2	0.050	RERATA_SKS =...	JURUSAN_SMA...				
3	0.100	3	0.150	GENDER	JURUSAN_SMA...	RERATA_SKS =...			
3	0.100	3	0.150	GENDER	JURUSAN_SMA...	RERATA_SKS =...			
3	0.100	3	0.150	GENDER	JURUSAN_SMA...	ASAL_SEKOLAH			
3	0.150	3	0.100	GENDER	JURUSAN_SMA...	ASISTEN			
3	0.100	3	0.100	GENDER	JURUSAN_SMA...	RERATA_SKS =...			
3	0.100	3	0.050	GENDER	RERATA_SKS =...	ASAL_SEKOLAH			
3	0.050	3	0.050	GENDER	RERATA_SKS =...	JURUSAN_SMA...			
3	0.050	3	0.050	GENDER	RERATA_SKS =...	JURUSAN_SMA...			
3	0.050	3	0.050	GENDER	RERATA_SKS =...	JURUSAN_SMA...			
3	0.050	3	0.050	GENDER	RERATA_SKS =...	ASISTEN			

Jumlah set aturan asosiasi dan total max size yang terbentuk berdasarkan FP-Growth

No. of Sets: 85
Total Max. Size: 5
Min. Size: 1
Max. Size: 5
Contains Item:
Update View

Jumlah data pasangan premis dan kesimpulan pada Association Rules

The screenshot displays the RapidMiner Studio interface with the 'AssociationRules (Create Association Rules)' process selected. The 'Results' tab is active, showing a table of generated association rules. The table has four columns: 'No.', 'Premises', 'Conclusion', and 'Support'. The rules are listed in descending order of support. The 'Premises' column contains logical expressions involving attributes like 'ASAL_SEKOLAH', 'JURUSAN_SMA', 'RERATA_SKS', and 'ASISTEN'. The 'Conclusion' column shows the predicted class, 'GENDER'. The 'Support' column shows the numerical support value for each rule.

No.	Premises	Conclusion	Support
3	ASAL_SEKOLAH	GENDER	0.250
4	JURUSAN_SMA = IPS	GENDER	0.250
5	RERATA_SKS = range2 [18.500 - 19.500]	GENDER	0.300
6	RERATA_SKS = range3 [19.500 - ∞]	GENDER	0.250
7	JURUSAN_SMA = IPA, RERATA_SKS = range3 [19.500 - ∞]	GENDER	0.100
8	RERATA_SKS = range2 [18.500 - 19.500], JURUS...	GENDER	0.100
9	RERATA_SKS = range2 [18.500 - 19.500], ASISTEN	GENDER	0.050
10	RERATA_SKS = range2 [18.500 - 19.500], JURUS...	GENDER	0.050
11	ASAL_SEKOLAH, JURUSAN_SMA = IPS	GENDER	0.100
12	ASAL_SEKOLAH, RERATA_SKS = range3 [19.500 - ∞]	GENDER	0.150
13	ASAL_SEKOLAH, JURUSAN_SMA = LAIN	GENDER	0.050
14	JURUSAN_SMA = IPS, RERATA_SKS = range3 [19.500 - ∞]	GENDER	0.100
15	ASISTEN, RERATA_SKS = range3 [19.500 - ∞]	GENDER	0.150
16	ASISTEN, JURUSAN_SMA = LAIN	GENDER	0.050

The screenshot displays the RapidMiner Studio interface with the 'AssociationRules (Create Association Rules)' process selected. The 'Results' tab is active, showing a network diagram of the generated association rules. The diagram consists of nodes representing individual rules, connected by lines indicating relationships or overlaps between them. Each node is labeled with a rule number and its support values, such as 'Rule 26 (0.050 / 1.000)' or 'Rule 21 (0.050 / 1.000)'. The nodes are arranged in a hierarchical or clustered manner, showing the structure of the rule set.

Grafik Chart pola distribusi data

