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Class: X

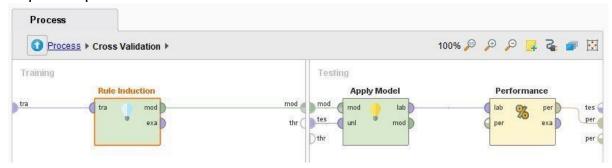
Practicum Report Module 11

Induction of Rules "Data Cuaca"

1. Decision Tree



2. Replace Operator Decision Tree



3. Rule Model

RuleModel

else YA (4 / 8)

correct: 8 out of 12 training examples.

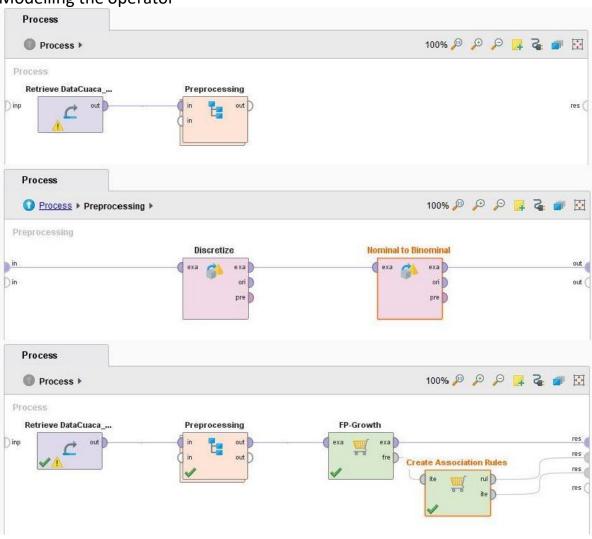
4. Result of Performance Vector

accuracy: 65.00% +/- 47.43% (micro average: 71.43%)

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

Association Rules "Data Cuaca"

1. Modelling the operator



2. Run the Process

3. Frequent Item Set (FP-Growth)

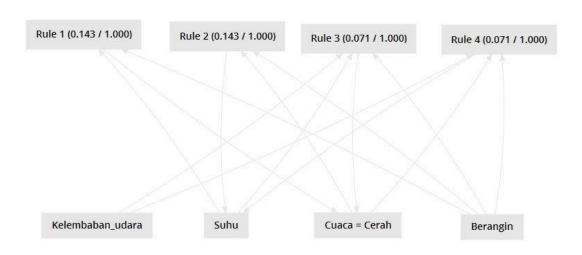
No. of Sets: 26	Size	Support	Item 1	Item 2	Item 3	Item 4	
otal Max. Size: 4	1	0.500	Kelembaban_udara				
n. Size: 1	1	0.429	Berangin				
ıx. Size: 4	1	0.429	Suhu				
ntains Item:	1	0.357	Cuaca = Cerah				
	1	0.357	Cuaca = Hujan				
Update View	1	0.286	Cuaca = Mendung				
	2	0.214	Kelembaban_udara	Berangin			
	2	0.214	Kelembaban_udara	Suhu			
	2	0.214	Kelembaban_udara	Cuaca = Cerah			
	2	0.143	Kelembaban_udara	Cuaca = Hujan			
	2	0.143	Kelembaban_udara	Cuaca = Mendung			
	2	0.143	Berangin	Suhu			
	2	0.143	Berangin	Cuaca = Cerah			
	2	0.143	Berangin	Cuaca = Hujan			
	2	0.143	Berangin	Cuaca = Mendung			
	2	0.214	Suhu	Cuaca = Cerah			
	2	0.071	Suhu	Cuaca = Hujan	Ac	tivate Windows	
	3	0.071	Kelembaban_udara	Berangin	Cuaca = Cerah		
	3	0.071	Kelembaban_udara	Berangin	Cuaca = Hujan		
	3	0.071	Kelembaban_udara	Berangin	Cuaca = Mendung		
	3	0.143	Kelembaban_udara	Suhu	Cuaca = Cerah		
	3	0.071	Kelembaban_udara	Suhu	Cuaca = Mendung		
	3	0.143	Berangin	Suhu	Cuaca = Cerah	2° 2 989° 1	
	4	0.071	Kelembaban_udara	Berangin	Suhu	ctivate Windows cuaca = Cerah to Settings to activate W	

4. Association Rules

a. Table View

No.	Premises	Conclusion	Support	Confidence	LaPlace	Gain
1	Berangin, Suhu	Cuaca = Cerah	0.143	1	1	-0.143
2	Berangin, Cuaca = Cerah	Suhu	0.143	1	1	-0.143
3	Kelembaban_udara, Berangin, Suhu	Cuaca = Cerah	0.071	1	1	-0.071
4	Kelembaban_udara, Berangin, Cuaca = Cerah	Suhu	0.071	1	1	-0.071

b. Graph View



c. ExampleSet (Nominal2Binomial) -> Charts View



Assignment

1. Induction Rule (Rule Model) and Performance Vector

RuleModel

```
if Rerata_SKS > 18.500 then TEPAT (1 / 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 18 training examples.
```

accuracy: 55.00% +/- 28.38% (micro average: 52.63%)

	true TERLAMBAT	true TEPAT	class precision
pred. TERLAMBAT	1	4	20.00%
pred. TEPAT	5	9	64.29%
class recall	16.67%	69.23%	

2. Association Rule

- a. Number of Bins = 2
 - FP Growth

lo. of Sets: 13	Size	Support	Item 1	Item 2
otal Max. Size: 2	1	0.737	Gender	
lin. Size: 1	1	0.526	Jurusan_SMA = IPA	
lax. Size: 2	1	0.316	Asal_Sekolah	
Contains Item:	1	0.263	Asisten	
	1	0.263	Jurusan_SMA = IPS	
Update View	1	0.263	Rerata_SKS	
	*1	0.211	Jurusan_SMA = LAIN	
	2	0.368	Gender	Jurusan_SMA = IPA
	2	0.263	Gender	Asal_Sekolah
	2	0.211	Gender	Asisten
	2	0.211	Gender	Jurusan_SMA = IPS
	2	0.263	Gender	Rerata_SKS
	2	0.211	Jurusan_SMA = IPA	Asisten

Table View and Graph

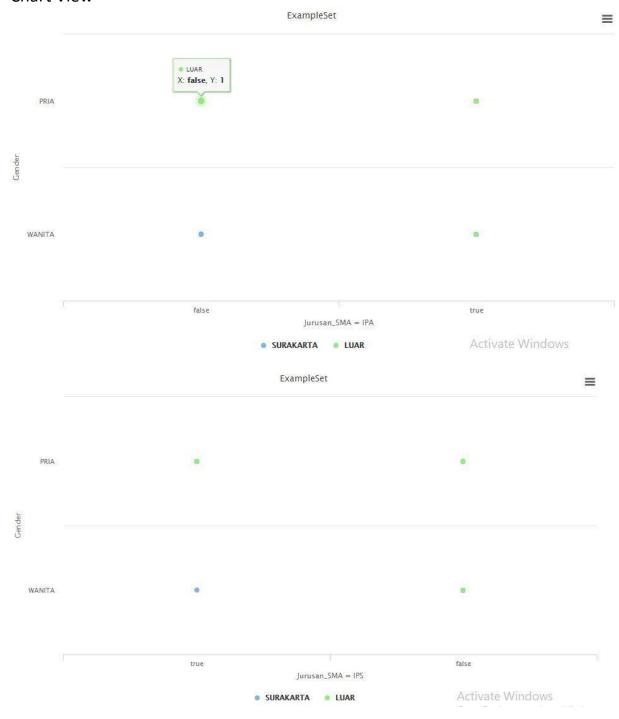
No.	Premises	Conclusion	Support	Confidence	LaPlace	Gain
4	Asal_Sekolah	Gender	0.263	0.833	0.960	-0.368
5	Rerata_SKS	Gender	0.263	1	1	-0.263

p-s	Lift	Convicti
0.030	1.131	1.579
0.069	1.357	00

 Rule 1 (0.211 / 0.800)
 Rule 2 (0.211 / 0.800)
 Rule 3 (0.211 / 0.800)
 Rule 4 (0.263 / 0.833)
 Rule 5 (0.263 / 1.000)

 Jurusan_SMA = IPA
 Asal_Sekolah
 Asisten
 Jurusan_SMA = IPS
 Rerata_SKS
 Gender

Chart View





b. Number of Bins = 3

• FP Growth

No. of Sets: 19	Size	Support	Item 1	Item 2
otal Max. Size: 2	1	0.737	Gender	
lin. Size: 1	1	0.526	Jurusan_SMA = IPA	
ax. Size: 2	i	0.421	Rerata_SKS = range1 [-∞ - 18.500]	
ontains Item:	i	0.316	Asal_Sekolah	
	1	0.316	Rerata_SKS = range2 [18.500 - 19.500]	
Update View	1	0.263	Asisten	
	i	0.263	Jurusan_SMA = IPS	
	i	0.263	Rerata_SKS = range3 [19.500 - ∞]	
	i	0.211	Jurusan_SMA = LAIN	
	2	0.368	Gender	Jurusan_SMA = IPA
	2	0.211	Gender	Rerata_SKS = range1 [-∞ - 18.500]
	2	0.263	Gender	Asal_Sekolah
	2	0.263	Gender	Rerata_SKS = range2 [18.500 - 19.500]
	2	0.211	Gender	Asisten
	2	0.211	Gender	Jurusan_SMA = IPS
	2	0.263	Gender	Rerata_SKS = range3 [19.500 7.00]
	2	0.211	Jurusan_SMA = IPA	Rerata_SKS = range1 [-∞ - 18.500]
	2	0.211	Jurusan_SMA = IPA	Rerata_SKS = range2 [18.500 - 19.500]
	2	0.211	Jurusan_SMA = IPA	Activate Windows Asisten Go to Settings to activate Windows

• Table View and Graph

No.	Premises	Conclusion	Support	Confidence	LaPlace	Gain
4	Asal_Sekolah	Gender	0.263	0.833	0.960	-0.368
5	Rerata_SKS = range2 [18.500 - 19.500]	Gender	0.263	0.833	0.960	-0.368
6	Rerata_SKS = range3 [19.500 - ∞]	Gender	0.263	1	1	-0.263

p-s	Lift	Convicti
0.030	1.131	1.579
0.030	1.131	1.579
0.069	1.357	00

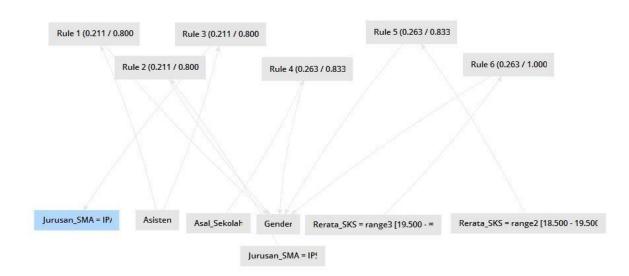


Chart View



