

NAMA : ELVY RAHMATILLAH IMAMI  
NIM : L200170041

## MODUL 11 INDUKSI DAN ATURAN ASOSIASI

### Langkah-langkah Praktikum

#### 1. Induksi Aturan Data Cuaca **Rule Model (Rule Induction)**

The screenshot shows the 'RuleModel (Rule Induction)' window. It has a sidebar with 'Description' and 'Annotations' tabs. The main area displays the following rules:

```
if Kelembapan_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)
```

Below the rules, it states: 'correct: 12 out of 13 training examples.'

#### Hasil Performance Vector

The screenshot shows the 'PerformanceVector (Performance)' window. It has a sidebar with 'Performance', 'Description', and 'Annotations' tabs. The main area displays the following performance metrics:

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%	

#### 2. Aturan Asosiasi Data Cuaca **Frequent Item Set (FP – Growth)**

Data

Annotations

No. of Sets: 26

Total Max. Size: 4

Min. Size:

Max. Size:

Contains Item:

Update View

Size	Support	Item 1	Item 2	Item 3	Item 4
1	0.500	Kelembapan_Ud...			
1	0.429	Berangin			
1	0.429	Suhu			
1	0.357	Cuaca = Cerah			
1	0.357	Cuaca = Hujan			
1	0.286	Cuaca = Mendung			
2	0.214	Kelembapan_Ud...	Berangin		
2	0.214	Kelembapan_Ud...	Suhu		
2	0.214	Kelembapan_Ud...	Cuaca = Cerah		
2	0.143	Kelembapan_Ud...	Cuaca = Hujan		
2	0.143	Kelembapan_Ud...	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		

Data

Annotations

No. of Sets: 26

Total Max. Size: 4

Min. Size: 

1

Max. Size: 

4

Contains Item:

Update View

Size	Support	Item 1	Item 2	Item 3	Item 4
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		
2	0.143	Suhu	Cuaca = Mendung		
3	0.071	Kelembapan_Ud...	Berangin	Suhu	
3	0.071	Kelembapan_Ud...	Berangin	Cuaca = Cerah	
3	0.071	Kelembapan_Ud...	Berangin	Cuaca = Hujan	
3	0.071	Kelembapan_Ud...	Berangin	Cuaca = Mendung	
3	0.143	Kelembapan_Ud...	Suhu	Cuaca = Cerah	
3	0.071	Kelembapan_Ud...	Suhu	Cuaca = Mendung	
3	0.143	Berangin	Suhu	Cuaca = Cerah	
4	0.071	Kelembapan_Ud...	Berangin	Suhu	Cuaca = Cerah

## Association Rules

Result History | FrequentItemSets (FP-Growth) | AssociationRules (Create Association Rules)

Show rules matching  
any of these conclusions: ▼

Suhu  
Cuaca = Cerah

Min. Criterion:  
confidence ▼

Min. Criterion Value:  
0.071

No.	Premises	Conclusion
1	Berangin, Suhu	Cuaca = Cerah
2	Berangin, Cuaca = Cerah	Suhu
3	Kelembapan_Udara, Berangin, Suhu	Cuaca = Cerah
4	Kelembapan_Udara, Berangin, Cuaca = Cerah	Suhu

## Graph View

ExampleSet (Nominal to Binominal) | ExampleSet (//Local Repository/wkwwk) | FrequentItemSets (FP-Growth) | AssociationRules (Create Association Rules)

Zoom

ISOM

☒ Node Labels  
☐ Edge Labels

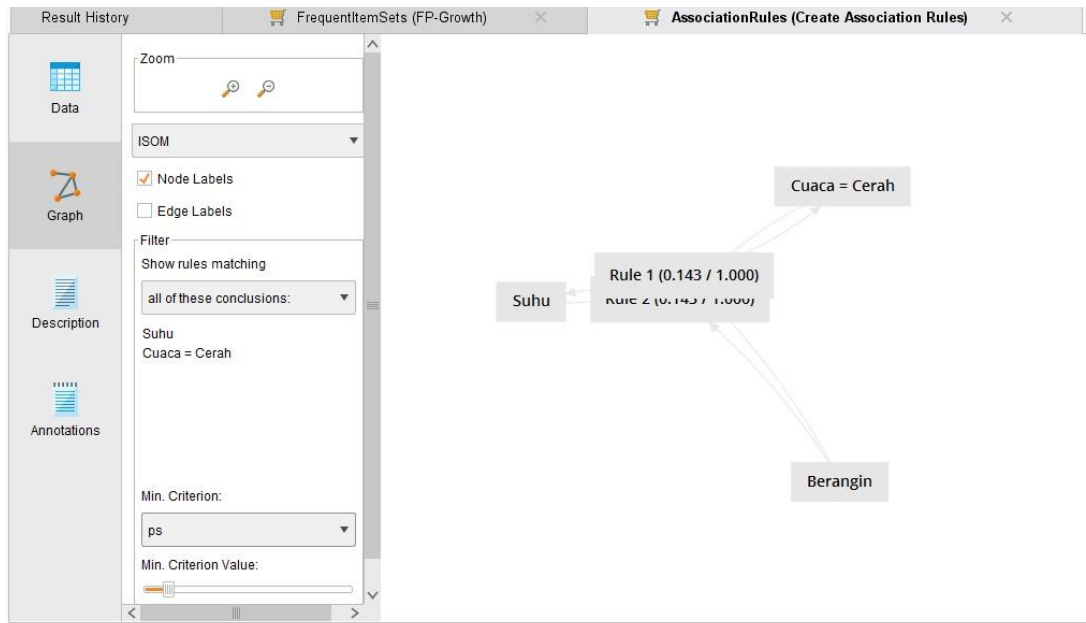
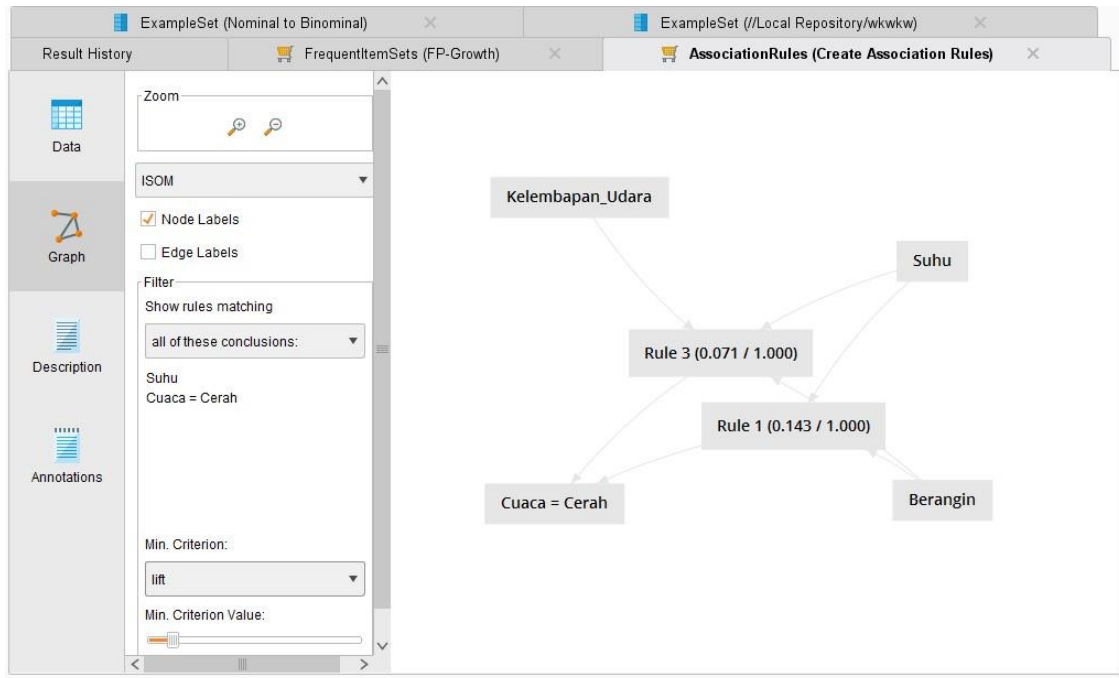
Filter  
Show rules matching  
all of these conclusions: ▼

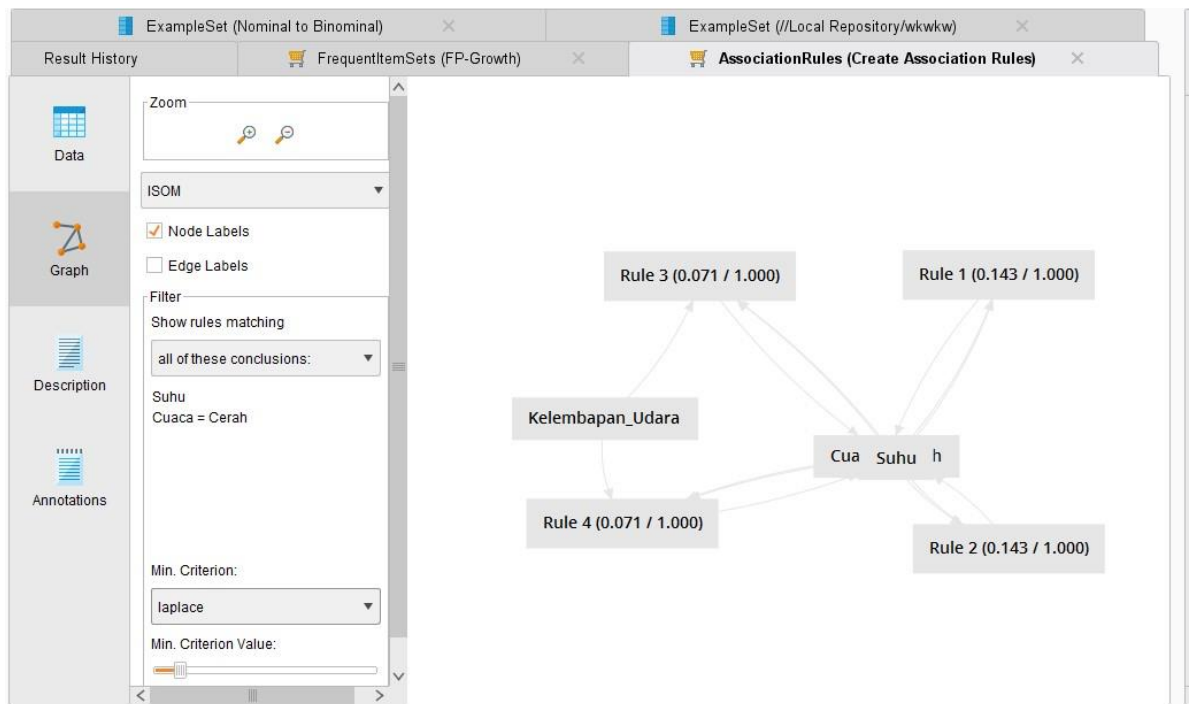
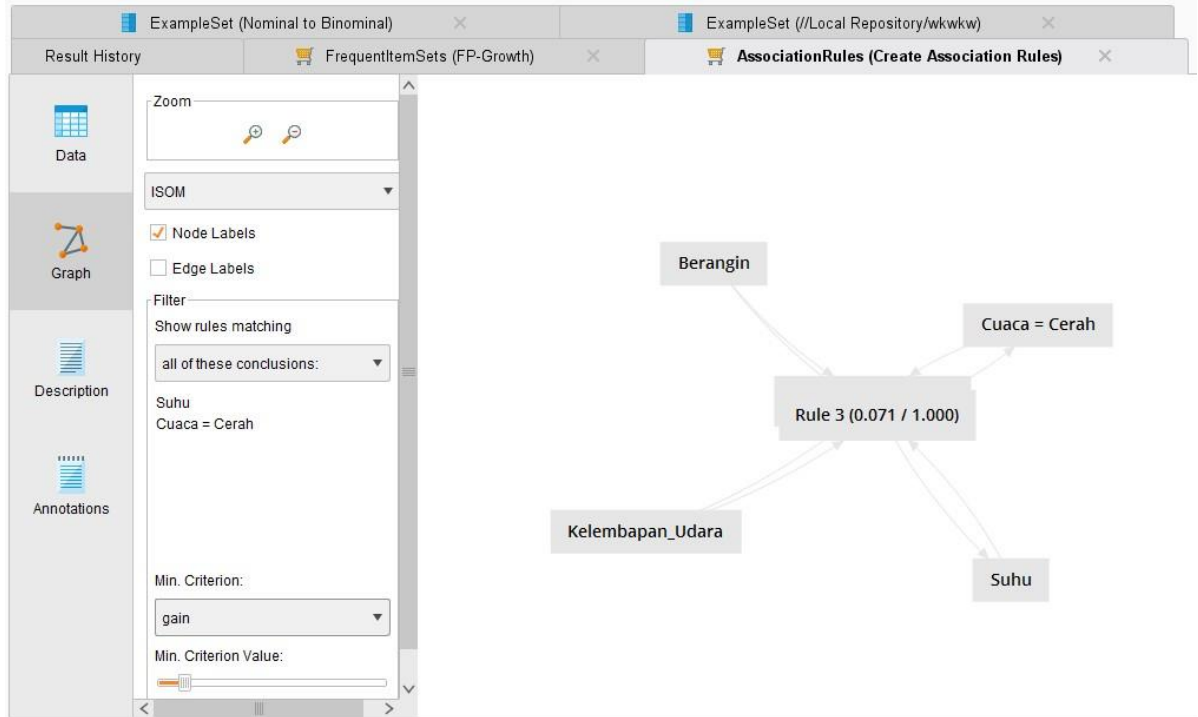
Suhu  
Cuaca = Cerah

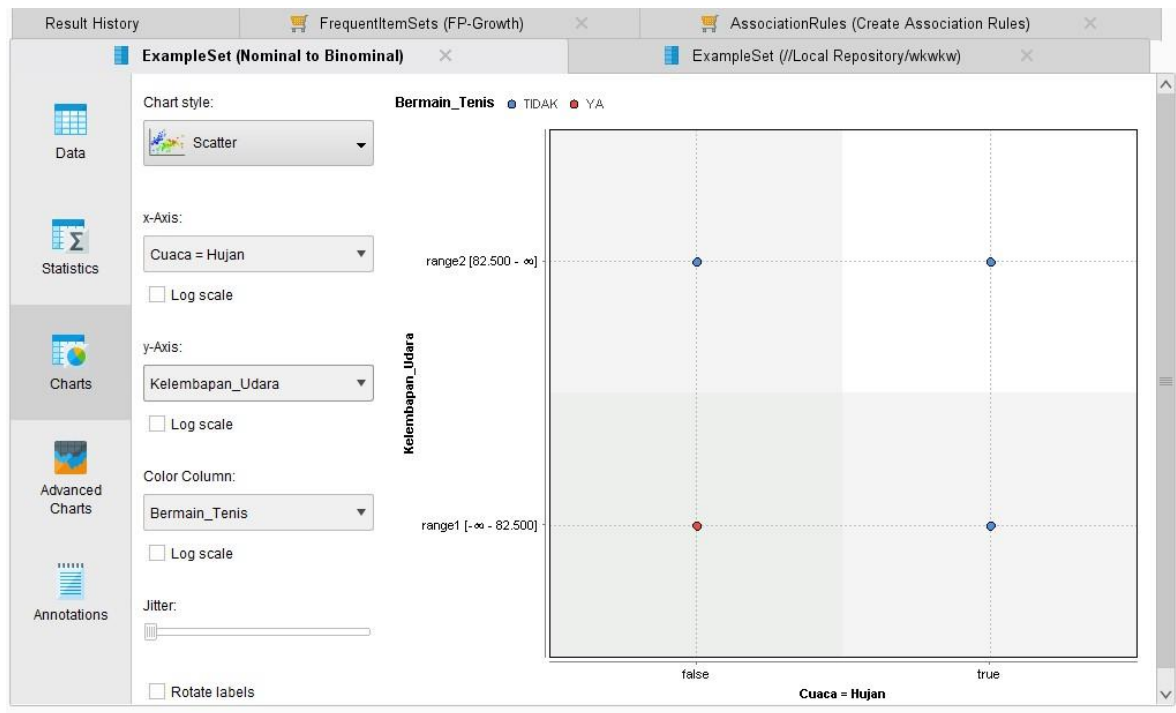
Min. Criterion:  
confidence ▼

Min. Criterion Value:  
0.071

```
graph TD; R1["Rule 1 (0.143 / 1.000)"] --> R2["Rule 2 (0.143 / 1.000)"]; R1 --> R3["Rule 3 (0.071 / 1.000)"]; R2 --> R4["Rule 4 (0.071 / 1.000)"]; R3 --> R4;
```







## TUGAS

**RuleModel (Rule Induction)**

**RuleModel**

Description

```

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)
  
```

Annotations

correct: 17 out of 19 training examples.

**PerformanceVector (Performance)**

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%	

Result History

Data

Annotations

No. of Sets: 85

Total Max. Size: 5

Min. Size:

Max. Size:

Contains Item:

Update View

Size	Support	Item 1	Item 2	Item 3	Item 4	Item 5
1	0.750	Gender				
1	0.500	Jurusan_SMA ...				
1	0.400	Rerata_SKS =...				
1	0.350	Rerata_SKS =...				
1	0.300	Asal_Sekolah				
1	0.300	Jurusan_SMA ...				
1	0.250	Asisten				
1	0.250	Rerata_SKS =...				
1	0.200	Jurusan_SMA ...				
2	0.350	Gender	Jurusan_SMA ...			
2	0.200	Gender	Rerata_SKS =...			
2	0.300	Gender	Rerata_SKS =...			
2	0.250	Gender	Asal_Sekolah			
2	0.250	Gender	Jurusan_SMA ...			
2	0.200	Gender	Asisten			

ExampleSet (Nominal to Binominal)

ExampleSet (/Local Repository/wkwkw)

Result History

FrequentItemSets (FP-Growth)

AssociationRules (Create Association Rules)

Data

Annotations

No. of Sets: 85

Total Max. Size: 5

Min. Size:

Max. Size:

Contains Item:

Update View

Size	Support	Item 1	Item 2	Item 3	Item 4	Item 5
2	0.350	Gender	Jurusan_SMA ...			
2	0.200	Gender	Rerata_SKS = ...			
2	0.300	Gender	Rerata_SKS = ...			
2	0.250	Gender	Asal_Sekolah			
2	0.250	Gender	Jurusan_SMA ...			
2	0.200	Gender	Asisten			
2	0.250	Gender	Rerata_SKS = ...			
2	0.150	Gender	Jurusan_SMA ...			
2	0.200	Jurusan_SMA ...	Rerata_SKS = ...			
2	0.200	Jurusan_SMA ...	Rerata_SKS = ...			
2	0.150	Jurusan_SMA ...	Asal_Sekolah			
2	0.200	Jurusan_SMA ...	Asisten			
2	0.100	Jurusan_SMA ...	Rerata_SKS = ...			
2	0.150	Rerata_SKS = ...	Asal_Sekolah			
2	0.100	Rerata_SKS = ...	Jurusan_SMA ...			
2	0.050	Rerata_SKS = ...	Asisten			

ExampleSet (Nominal to Binominal)

ExampleSet (/Local Repository/wkwkw)

Result History

FrequentItemSets (FP-Growth)

AssociationRules (Create Association Rules)

Data

Annotations

No. of Sets: 10

Total Max. Size: 2

Min. Size:

Max. Size:

Contains Item:

Update View

Size	Support	Item 1	Item 2
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	
2	0.350	Gender	Jurusan_SMA = IPA
2	0.250	Gender	Asal_Sekolah
2	0.250	Gender	Jurusan_SMA = IPS
2	0.250	Gender	Rerata_SKS

ExampleSet (Nominal to Binominal)

ExampleSet (/Local Repository/wkwkw)

Result History

FrequentItemSets (FP-Growth)

AssociationRules (Create Association Rules)

Data

Annotations

No. of Sets: 13

Total Max. Size: 2

Min. Size:

Max. Size:

Contains Item:

Show annotations of the data

Update View

Size	Support	Item 1	Item 2
1	0.750	Gender	
1	0.500	Jurusan_SMA = IPA	
1	0.400	Rerata_SKS = range1 [-∞ - 1...	
1	0.350	Rerata_SKS = range2 [18.50...	
1	0.300	Asal_Sekolah	
1	0.300	Jurusan_SMA = IPS	
1	0.250	Asisten	
1	0.250	Rerata_SKS = range3 [19.50...	
2	0.350	Gender	Jurusan_SMA = IPA
2	0.300	Gender	Rerata_SKS = range2 [18.50...
2	0.250	Gender	Asal_Sekolah
2	0.250	Gender	Jurusan_SMA = IPS
2	0.250	Gender	Rerata_SKS = range3 [19.50...



