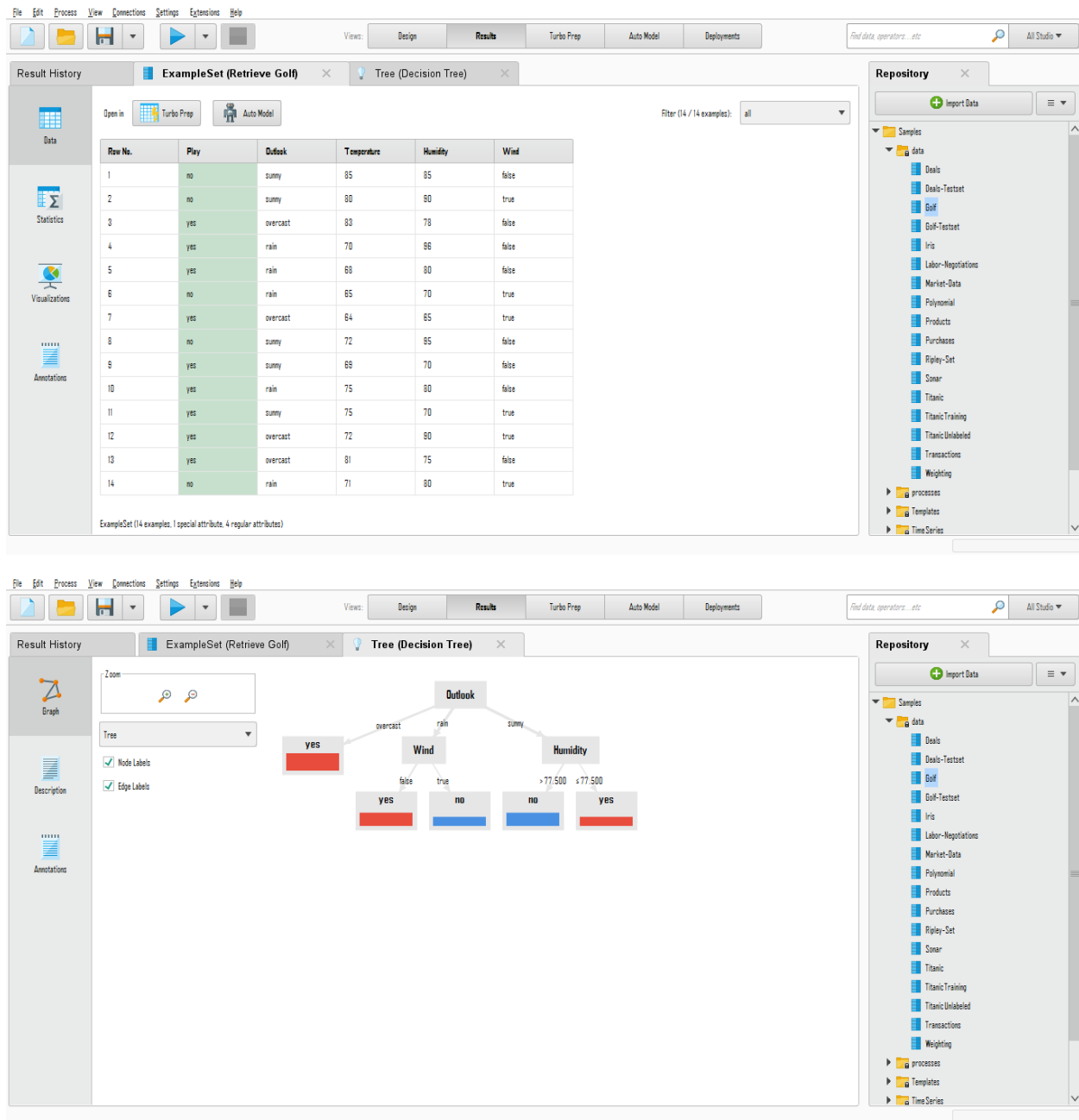


## Tugas 2 Data Science

Nama : Rizka Irijiba

NIM : 19.01.013.116

### a. Dataset Golf : Decision Tree



## b. Dataset Iris : Decision Tree

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Deployments

Find data, operators, etc. All Studio

Result History ExampleSet (Retrieve Iris) Tree (Decision Tree)

Open in Turbo Prep Auto Model

Filter (150 / 150 examples): all

Row No.	id	label	a1	a2	a3	a4
1	id_1	Iris-setosa	5.100	3.500	1.400	0.200
2	id_2	Iris-setosa	4.900	3	1.400	0.200
3	id_3	Iris-setosa	4.700	3.200	1.300	0.200
4	id_4	Iris-setosa	4.600	3.100	1.500	0.200
5	id_5	Iris-setosa	5	3.600	1.400	0.200
6	id_6	Iris-setosa	5.400	3.800	1.700	0.400
7	id_7	Iris-setosa	4.600	3.400	1.400	0.300
8	id_8	Iris-setosa	5	3.400	1.500	0.200
9	id_8	Iris-setosa	4.400	2.800	1.400	0.200
10	id_10	Iris-setosa	4.900	3.100	1.500	0.100
11	id_11	Iris-setosa	5.400	3.700	1.500	0.200
12	id_12	Iris-setosa	4.900	3.400	1.600	0.200
13	id_13	Iris-setosa	4.800	3	1.400	0.100
14	id_14	Iris-setosa	4.300	3	1.100	0.100
15	id_15	Iris-setosa	5.800	4	1.200	0.200

ExampleSet (150 examples, 2 special attributes, 4 regular attributes)

Repository

- Import Data
- Samples
  - data
    - Deals
    - Deals-Testset
    - Golf
    - Golf-Testset
    - Iris
    - Labor-Negotiations
    - Market-Data
    - Polynomial
    - Products
    - Purchases
    - Ripley-Set
    - Sonar
    - Titanic
    - Titanic Training
    - Titanic Unlabeled
    - Transactions
    - Weighting
  - processes
  - Templates
  - Time Series

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Deployments

Find data, operators, etc. All Studio

Result History ExampleSet (Retrieve Iris) Tree (Decision Tree)

Zoom

Tree

☒ Node Labels

☒ Edge Labels

Decision Tree Structure:

```
graph TD
    n3 -- "> 2.450" --> n4
    n3 -- "<= 2.450" --> l1[Iris-setosa]
    n4 -- "> 1.750" --> l2[Iris-virginica]
    n4 -- "<= 1.750" --> n3_1[n3]
    n3_1 -- "> 5.950" --> l3[Iris-virginica]
    n3_1 -- "<= 5.950" --> n3_2[n3]
    n3_2 -- "> 4.950" --> n4_1[n4]
    n3_2 -- "<= 4.950" --> l4[Iris-versicolor]
    n4_1 -- "> 1.550" --> l5[Iris-versicolor]
    n4_1 -- "<= 1.550" --> l6[Iris-virginica]
```

Repository

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    - Weighting
  - processes
  - Templates
  - Time Series

### c. Dataset Iris: K-Means

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Deployments

Find data, operators, etc. All Studio

Result History

ExampleSet (Clustering) Cluster Model (Clustering)

Open in Turbo Prep Auto Model

Filter (150 / 150 examples): all

Row No.	id	label	cluster	a1	a2	a3	a4
1	id_1	Iris-setosa	cluster_0	5.100	3.500	1.400	0.200
2	id_2	Iris-setosa	cluster_0	4.900	3	1.400	0.200
3	id_3	Iris-setosa	cluster_0	4.700	3.200	1.300	0.200
4	id_4	Iris-setosa	cluster_0	4.600	3.100	1.500	0.200
5	id_5	Iris-setosa	cluster_0	5	3.600	1.400	0.200
6	id_6	Iris-setosa	cluster_0	5.400	3.800	1.700	0.400
7	id_7	Iris-setosa	cluster_0	4.600	3.400	1.400	0.300
8	id_8	Iris-setosa	cluster_0	5	3.400	1.500	0.200
9	id_9	Iris-setosa	cluster_0	4.400	2.800	1.400	0.200
10	id_10	Iris-setosa	cluster_0	4.900	3.100	1.500	0.100
11	id_11	Iris-setosa	cluster_0	5.400	3.700	1.500	0.200
12	id_12	Iris-setosa	cluster_0	4.800	3.400	1.600	0.200
13	id_13	Iris-setosa	cluster_0	4.800	3	1.400	0.100
14	id_14	Iris-setosa	cluster_0	4.300	3	1.100	0.100
15	id_15	Iris-setosa	cluster_0	5.800	4	1.200	0.200

ExampleSet (150 examples, 3 special attributes, 4 regular attributes)

Repository

Import Data

Training Resources (connected)

Samples

- data
  - Deals
  - Deals-Testset
  - Golf
  - Golf-Testset
  - Iris
  - Labor-Negotiations
  - Market-Data
  - Polynomial
  - Products
  - Purchases
  - Ripley-Set
  - Sonar
  - Titanic
  - Titanic Training
  - Titanic Unlabeled
  - Transactions
  - Weighting
- processes
- Templates

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Deployments

Find data, operators, etc. All Studio

Result History

ExampleSet (Clustering) Cluster Model (Clustering)

Cluster Model

Cluster 0: 50 items  
Cluster 1: 12 items  
Cluster 2: 25 items  
Cluster 3: 24 items  
Cluster 4: 39 items  
Total number of items: 150

Telegram

Repository

Import Data

Training Resources (connected)

Samples

- data
  - Deals
  - Deals-Testset
  - Golf
  - Golf-Testset
  - Iris
  - Labor-Negotiations
  - Market-Data
  - Polynomial
  - Products
  - Purchases
  - Ripley-Set
  - Sonar
  - Titanic
  - Titanic Training
  - Titanic Unlabeled
  - Transactions
  - Weighting
- processes
- Templates

#### d. Dataset CPU: K-Means

Orange3 interface showing the results of a K-Means clustering model. The 'Results' view is active, displaying the 'ExampleSet (Clustering)' widget. The table shows 14 data points with their assigned clusters. The 'Cluster Model (Clustering)' widget is also visible. The 'Repository' panel on the right shows a list of available datasets.

id	cluster	MYCT	MMIN	MMAX	CACH	CHMIN	CHMAX	PERFORMANCE
1	cluster_0	125	256	6000	256	16	128	168
2	cluster_2	29	8000	32000	32	8	32	269
3	cluster_2	29	8000	32000	32	8	32	220
4	cluster_2	29	8000	32000	32	8	32	172
5	cluster_0	29	8000	16000	32	8	16	132
6	cluster_2	29	8000	32000	64	8	32	318
7	cluster_2	23	16000	32000	64	16	32	267
8	cluster_2	23	16000	32000	64	16	32	489
9	cluster_4	23	16000	64000	64	16	32	638
10	cluster_1	23	32000	64000	128	32	64	1144
11	cluster_0	400	1000	3000	0	1	2	38
12	cluster_0	400	512	3500	4	1	6	40
13	cluster_0	60	2000	8000	65	1	8	92
14	cluster_0	50	4000	16000	65	1	8	138

Orange3 interface showing the 'Cluster Model' widget. The widget displays the results of the K-Means clustering model, including the number of items in each cluster and the total number of items. The 'Repository' panel on the right shows a list of available datasets.

**Cluster Model**

Cluster 0: 120 items  
Cluster 1: 1 items  
Cluster 2: 27 items  
Cluster 3: 49 items  
Cluster 4: 2 items  
Total number of items: 199

e. Dataset Data Pemilu KPU: Klasifikasi

f. Dataset Heating Oil: K-Medoids

Result History: ExampleSet (Clustering) x Cluster Model (Clustering) x

Open in: Turbo Prep Auto Model

Filter (1,218 / 1,218 examples): all

Row No.	id	cluster	Insulation, Temperature...
1	1	cluster_0	6.74 132.4 23.8 4
2	2	cluster_0	10.43 263.4 56.7 4
3	3	cluster_0	3.81 145.2 28.0 6
4	4	cluster_0	6.50 186.4 45.1 3
5	5	cluster_0	2.80 131.5 20.8 2
6	6	cluster_0	5.76 128.3 21.5 3
7	7	cluster_0	5.72 181.4 23.5 3
8	8	cluster_0	6.88 181.2 38.2 6
9	9	cluster_0	5.77 184.3 42.5 3
10	10	cluster_0	10.42 225.3 51.1 1
11	11	cluster_0	6.80 178.2 42.1 2
12	12	cluster_0	3.83 121.1 19.8 2
13	13	cluster_0	10.43 186.5 45.1 6
14	14	cluster_0	8.58 206.2 50.1 8
15	15	cluster_0	4.86 176.5 41.4 6

ExampleSet (1,218 examples, 2 special attributes, 1 regular attribute)

Repository: Import Data

- TrainingResources (connected)
- Samples
  - data
    - Deals
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    - Golf-Testset
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    - Titanic
    - Titanic Training
    - Titanic Unlabeled
    - Transactions
    - Weighting
  - processes
  - Templates

Result History: ExampleSet (Clustering) x Cluster Model (Clustering) x

Cluster Model

Cluster 0: 1217 items  
Cluster 1: 1 items  
Total number of items: 1218

Repository: Import Data

- TrainingResources (connected)
- Samples
  - data
    - Deals
    - Deals-Testset
    - Golf
    - Golf-Testset
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    - Labor-Negotiations
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## g. Dataset Transaksi: K-Means

The screenshot shows the Orange3 data mining software interface. The top window, titled 'ExampleSet (Clustering)', displays a table of 12 data points. The bottom window, titled 'Cluster Model', shows the results of the K-Means clustering process, including the number of items in each cluster and the total number of items.

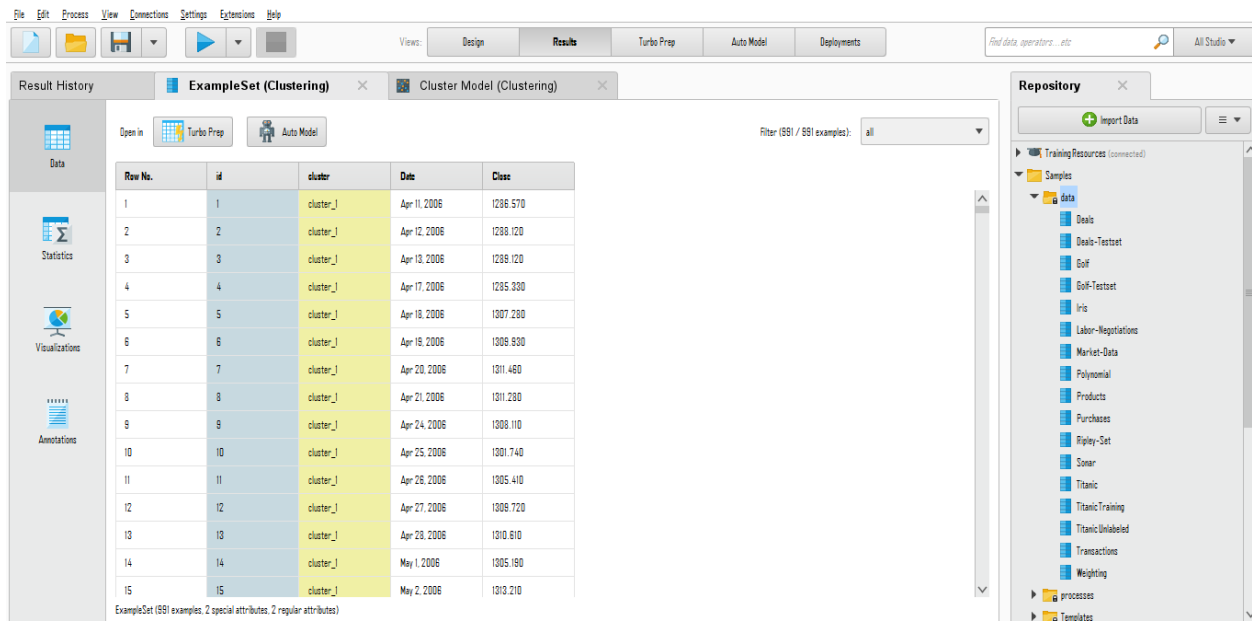
**ExampleSet (Clustering) Data:**

Row No.	id	cluster	Customer	Gula	Kopi	Aqua	Popok	Sprai	Selam
1	1	cluster_0	1	1	1	0	0	0	1
2	2	cluster_0	2	1	1	0	1	1	0
3	3	cluster_0	3	0	0	0	1	1	0
4	4	cluster_2	4	1	0	1	0	0	0
5	5	cluster_2	5	0	0	1	1	0	0
6	6	cluster_2	6	1	1	0	0	0	1
7	7	cluster_4	7	0	0	0	0	1	0
8	8	cluster_4	8	0	0	1	1	1	1
9	9	cluster_1	9	1	1	0	0	0	0
10	10	cluster_1	10	0	0	1	0	0	0
11	11	cluster_1	11	1	1	1	0	0	0
12	12	cluster_3	12	0	0	0	0	1	1

**Cluster Model Results:**

- Cluster 0: 3 items
- Cluster 1: 3 items
- Cluster 2: 3 items
- Cluster 3: 1 items
- Cluster 4: 2 items
- Total number of items: 12

## h. Dataset Harga Saham: K-Medoids



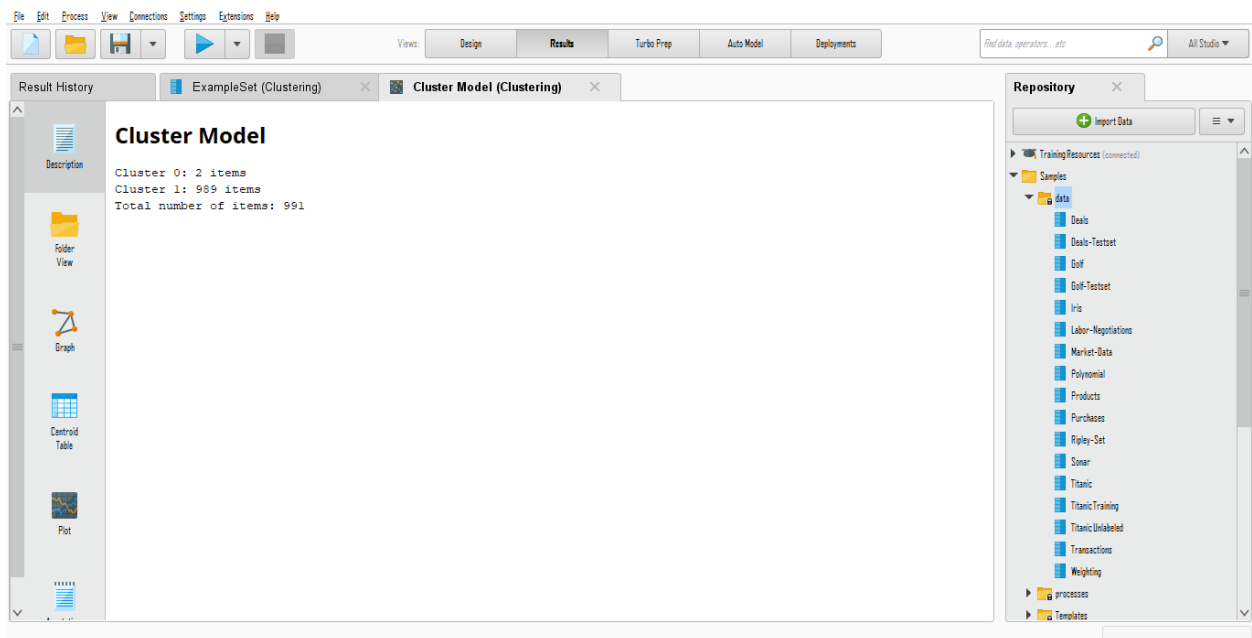
Result History: ExampleSet (Clustering) Cluster Model (Clustering)

Open in: Turbo Prep Auto Model

Filter (ISI / ISI examples): all

Row No.	id	cluster	Date	Close
1	1	cluster_1	Apr 11, 2006	1286.570
2	2	cluster_1	Apr 12, 2006	1288.120
3	3	cluster_1	Apr 13, 2006	1288.120
4	4	cluster_1	Apr 17, 2006	1285.330
5	5	cluster_1	Apr 18, 2006	1307.280
6	6	cluster_1	Apr 19, 2006	1309.830
7	7	cluster_1	Apr 20, 2006	1311.480
8	8	cluster_1	Apr 21, 2006	1311.290
9	9	cluster_1	Apr 24, 2006	1308.110
10	10	cluster_1	Apr 25, 2006	1301.740
11	11	cluster_1	Apr 26, 2006	1305.410
12	12	cluster_1	Apr 27, 2006	1306.720
13	13	cluster_1	Apr 28, 2006	1310.610
14	14	cluster_1	May 1, 2006	1305.180
15	15	cluster_1	May 2, 2006	1313.210

ExampleSet (ISI) examples, 2 special attributes, 2 regular attributes



Result History: ExampleSet (Clustering) Cluster Model (Clustering)

Cluster Model

Description

Cluster 0: 2 items  
Cluster 1: 989 items  
Total number of items: 991

Folder View

Graph

Centroid Table

Plot

Repository: Import Data

TrainingResources (connected)

Samples

data

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- Sonar
- Titanic
- Titanic Training
- Titanic Unlabeled
- Transactions
- Weighting

processes

Templates