

## I. Decision Tree vs Naïve Bayes vs Neural Network

Data	Decision Tree	Naïve Bayes	Neural Network
DM-44	75%	85%	85%
DM-46	54%	63%	62%
DM-47	76%	82%	85%
DM-48	96%	100%	100%
DM-49	92%	90%	88%
DM-45 (Invest)	97%	99%	99%
DM-45 (Transformasi)	95%	96%	98%

### Screen Shoot:

#### A. DM-44

##### 1. Decision Tree

PerformanceVector (DM44 Naïve Bayes) | PerformanceVector (DM44 Neural Network) | PerformanceVector (DM44 Decision Tree)

Result History | Criterion | accuracy | precision | recall | AUC (optimistic) | AUC | AUC (pessimistic) | Description | Annotations

Table View | Plot View

accuracy: 75.00% +/- 13.60% (mikro: 75.00%)

	true Baik	true Buruk	class precision
pred. Baik	44	17	72.13%
pred. Buruk	8	31	79.49%
class recall	84.62%	64.58%	

Repository | Add Data | Samples | DB | Local Repository (Eri Ahmad, H) | data (Eri Ahmad, H) | processes (Eri Ahmad, H) | contoh (Eri Ahmad, H - v1, 11/16/17) | Cloud Repository (disconnected)

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## 2. Naïve Bayes

The screenshot displays the RapidMiner Studio interface with the 'PerformanceVector (DM44 Naïve Bayes)' model selected. The 'Results' tab is active, showing a table of performance metrics. The left sidebar contains 'Performance', 'Description', and 'Annotations' sections. The right sidebar shows the 'Repository' with 'Add Data' and a list of data sources. The bottom status bar indicates 'Page 2 of 11' and the system clock shows 11:10 PM on 11/16/2017.

Performance metrics for Naïve Bayes:

- Criterion: accuracy, precision, recall
- AUC (optimistic): 85.00%
- AUC (pessimistic): 85.00%

Confusion Matrix (Table View):

	true Baik	true Buruk	class precision
pred. Baik	45	8	84.91%
pred. Buruk	7	40	85.11%
class recall	86.54%	83.33%	

## 3. Neural Network

The screenshot displays the RapidMiner Studio interface with the 'PerformanceVector (DM44 Neural Network)' model selected. The 'Results' tab is active, showing a table of performance metrics. The left sidebar contains 'Performance', 'Description', and 'Annotations' sections. The right sidebar shows the 'Repository' with 'Add Data' and a list of data sources. The bottom status bar indicates 'Page 2 of 11' and the system clock shows 11:11 PM on 11/16/2017.

Performance metrics for Neural Network:

- Criterion: accuracy, precision, recall
- AUC (optimistic): 85.00%
- AUC (pessimistic): 85.00%

Confusion Matrix (Table View):

	true Baik	true Buruk	class precision
pred. Baik	46	9	83.64%
pred. Buruk	6	39	86.67%
class recall	88.46%	81.25%	

## B. DM-46

### 1. Decision Tree

The screenshot shows the RapidMiner Studio interface with the 'PerformanceVector (DM46 Decision Tree)' window selected. The 'Table View' is active, displaying the following performance metrics:

accuracy: 54.00% +/- 6.63% (mikro: 54.00%)

	true YA	true TIDAK	class precision
pred. YA	51	46	52.58%
pred. TIDAK	0	3	100.00%
class recall	100.00%	6.12%	

The left sidebar shows the 'Performance' tab selected, with 'accuracy' chosen as the criterion. The right sidebar shows the 'Repository' tab with a tree structure of data sources.

### 2. Naïve Bayes

The screenshot shows the RapidMiner Studio interface with the 'PerformanceVector (DM46 Naïve Bayes)' window selected. The 'Table View' is active, displaying the following performance metrics:

accuracy: 63.00% +/- 12.69% (mikro: 63.00%)

	true YA	true TIDAK	class precision
pred. YA	38	24	61.29%
pred. TIDAK	13	25	65.79%
class recall	74.51%	51.02%	

The left sidebar shows the 'Performance' tab selected, with 'accuracy' chosen as the criterion. The right sidebar shows the 'Repository' tab with a tree structure of data sources.

### 3. Neural Network

The screenshot shows the RapidMiner Studio interface with the 'Results' tab selected. The main window displays the 'PerformanceVector (DM46 Neural Network)' results. The 'Table View' is selected, showing a table with the following data:

	true YA	true TIDAK	class precision
pred. YA	34	21	61.82%
pred. TIDAK	17	28	62.22%
class recall	66.67%	57.14%	

Summary statistics: accuracy: 62.00% +/- 8.72% (mikro: 62.00%)

The left sidebar shows the 'Performance' section with 'accuracy' selected. The right sidebar shows the 'Repository' section with 'Add Data' and 'DB' options.

### C. DM-47

#### 1. Decision Tree

The screenshot shows the RapidMiner Studio interface with the 'Results' tab selected. The main window displays the 'PerformanceVector (DM47 Decision Tree)' results. The 'Table View' is selected, showing a table with the following data:

	true Baik	true Buruk	class precision
pred. Baik	22	8	73.33%
pred. Buruk	16	54	77.14%
class recall	57.89%	87.10%	

Summary statistics: accuracy: 76.00% +/- 11.14% (mikro: 76.00%)

The left sidebar shows the 'Performance' section with 'accuracy' selected. The right sidebar shows the 'Repository' section with 'Add Data' and 'DB' options.

## 2. Naïve Bayes

The screenshot displays the RapidMiner Studio interface with the 'PerformanceVector (DM47 Naïve Bayes)' model selected. The 'Results' tab is active, showing a table view of the model's performance metrics. The accuracy is 82.00% with a standard deviation of +/- 11.66% (micro: 82.00%). The table provides a detailed breakdown of predictions for 'Baik' and 'Buruk' classes, including true positives, false positives, true negatives, and false negatives, along with class precision and recall.

	true Baik	true Buruk	class precision
pred. Baik	30	10	75.00%
pred. Buruk	8	52	86.67%
class recall	78.95%	83.87%	

The interface also includes a 'Repository' panel on the right, showing the data source 'data (Eri Ahmad. H)' and a 'Local Repository' section. The bottom status bar indicates the system time as 11:26 PM on 11/16/2017.

## 3. Neural Network

The screenshot displays the RapidMiner Studio interface with the 'PerformanceVector (DM47 Neural Network)' model selected. The 'Results' tab is active, showing a table view of the model's performance metrics. The accuracy is 85.00% with a standard deviation of +/- 9.22% (micro: 85.00%). The table provides a detailed breakdown of predictions for 'Baik' and 'Buruk' classes, including true positives, false positives, true negatives, and false negatives, along with class precision and recall.

	true Baik	true Buruk	class precision
pred. Baik	30	7	81.08%
pred. Buruk	8	55	87.30%
class recall	78.95%	88.71%	

The interface also includes a 'Repository' panel on the right, showing the data source 'data (Eri Ahmad. H)' and a 'Local Repository' section. The bottom status bar indicates the system time as 11:27 PM on 11/16/2017.

## D. DM-48

### 1. Decision Tree

The screenshot shows the RapidMiner Studio interface with the 'PerformanceVector (DM47 Decision Tree)' window open. The 'Table View' is selected, displaying the following performance metrics:

	true LOYAL	true TIDAK LOYAL	class precision
pred. LOYAL	72	0	100.00%
pred. TIDAK LOYAL	4	24	85.71%
class recall	94.74%	100.00%	

Summary statistics: accuracy: 96.00% +/- 4.90% (mikro: 96.00%)

The interface also shows a 'Repository' panel on the right with a 'Local Repository' containing 'data (Eri Ahmad. H)' and 'processes (Eri Ahmad. H)'.

### 2. Naive Bayes

The screenshot shows the RapidMiner Studio interface with the 'PerformanceVector (DM47 Naive Bayes)' window open. The 'Table View' is selected, displaying the following performance metrics:

	true LOYAL	true TIDAK LOYAL	class precision
pred. LOYAL	76	0	100.00%
pred. TIDAK LOYAL	0	24	100.00%
class recall	100.00%	100.00%	

Summary statistics: accuracy: 100.00% +/- 0.00% (mikro: 100.00%)

The interface also shows a 'Repository' panel on the right with a 'Local Repository' containing 'data (Eri Ahmad. H)' and 'processes (Eri Ahmad. H)'.

### 3. Neural Network

PerformanceVector (DM48 Neural Network)

Table View Plot View

accuracy: 100.00% +/- 0.00% (mikro: 100.00%)

	true LOYAL	true TIDAK LOYAL	class precision
pred. LOYAL	76	0	100.00%
pred. TIDAK LOYAL	0	24	100.00%
class recall	100.00%	100.00%	

Repository

- Local Repository (Eri Ahmad, H)
- data (Eri Ahmad, H)
- processes (Eri Ahmad, H)
- contoh (Eri Ahmad, H - v1, 11/16/17)

### E. DM-49

#### 1. Decision Tree

PerformanceVector (DM49 Decision Tree)

Table View Plot View

accuracy: 92.00% +/- 7.48% (mikro: 92.00%)

	true Tidak Efisien	true Efisien	class precision
pred. Tidak Efisien	54	7	88.52%
pred. Efisien	1	38	97.44%
class recall	98.18%	84.44%	

Repository

- Local Repository (Eri Ahmad, H)
- data (Eri Ahmad, H)
- processes (Eri Ahmad, H)
- contoh (Eri Ahmad, H - v1, 11/16/17)

## 2. Naïve Bayes

The screenshot displays the RapidMiner Studio interface with the 'PerformanceVector (DM49 Naïve Bayes)' tab selected. The 'Table View' is active, showing the following performance metrics:

accuracy: 90.00% +/- 6.32% (mikro: 90.00%)

	true Tidak Efisien	true Efisien	class precision
pred. Tidak Efisien	50	5	90.91%
pred. Efisien	5	40	88.89%
class recall	90.91%	88.89%	

The left sidebar shows the 'Performance' tab selected, with sub-tabs for 'Criterion', 'Description', and 'Annotations'. The 'Criterion' sub-tab is active, showing 'accuracy', 'precision', 'recall', 'AUC (optimistic)', 'AUC', and 'AUC (pessimistic)'. The 'Repository' panel on the right shows a 'Local Repository' with 'data' and 'processes' folders, and a 'Cloud Repository' (disconnected).

## 3. Neural Network

The screenshot displays the RapidMiner Studio interface with the 'PerformanceVector (DM49 Neural Network)' tab selected. The 'Table View' is active, showing the following performance metrics:

accuracy: 88.00% +/- 6.00% (mikro: 88.00%)

	true Tidak Efisien	true Efisien	class precision
pred. Tidak Efisien	49	6	89.09%
pred. Efisien	6	39	86.67%
class recall	89.09%	86.67%	

The left sidebar shows the 'Performance' tab selected, with sub-tabs for 'Criterion', 'Description', and 'Annotations'. The 'Criterion' sub-tab is active, showing 'accuracy', 'precision', 'recall', 'AUC (optimistic)', 'AUC', and 'AUC (pessimistic)'. The 'Repository' panel on the right shows a 'Local Repository' with 'data' and 'processes' folders, and a 'Cloud Repository' (disconnected).



## F. DM45 (INVEST)

### 1. Decision Tree

PerformanceVector (DM INVEST Naive Bayes) | PerformanceVector (DM INVEST Neural Network) | PerformanceVector (DM INVEST Decision Tree)

Result History | Criterion | accuracy | precision | recall | AUC (optimistic) | AUC | AUC (pessimistic) | Description | Annotations

Table View | Plot View

accuracy: 97.00% +/- 4.58% (mikro: 97.00%)

	true Investasi	true Tidak Investasi	class precision
pred. Investasi	60	1	98.36%
pred. Tidak Investasi	2	37	94.87%
class recall	96.77%	97.37%	

Repository | Add Data | Samples | DB | Local Repository (Eri Ahmad, H) | data (Eri Ahmad, H) | processes (Eri Ahmad, H) | contoh (Eri Ahmad, H - v1, 11/16/17) | Cloud Repository (disconnected)

### 2. Naïve Bayes

PerformanceVector (DM INVEST Decision Tree) | PerformanceVector (DM INVEST Neural Network) | PerformanceVector (DM INVEST Naive Bayes)

Result History | Criterion | accuracy | precision | recall | AUC (optimistic) | AUC | AUC (pessimistic) | Description | Annotations

Table View | Plot View

accuracy: 99.00% +/- 3.00% (mikro: 99.00%)

	true Investasi	true Tidak Investasi	class precision
pred. Investasi	62	1	98.41%
pred. Tidak Investasi	0	37	100.00%
class recall	100.00%	97.37%	

Repository | Add Data | Samples | DB | Local Repository (Eri Ahmad, H) | data (Eri Ahmad, H) | processes (Eri Ahmad, H) | contoh (Eri Ahmad, H - v1, 11/16/17) | Cloud Repository (disconnected)

### 3. Neural Network

Document1 - Word

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Views: Design Results

Need help?

Result History

PerformanceVector (DM INVEST Naive Bayes)

PerformanceVector (DM INVEST Decision Tree)

PerformanceVector (DM INVEST Neural Network)

Criterion

- accuracy
- precision
- recall
- AUC (optimistic)
- AUC
- AUC (pessimistic)

Description

Annotations

Table View Plot View

accuracy: 99.00% +/- 3.00% (mikro: 99.00%)

	true Investasi	true Tidak Investasi	class precision
pred. Investasi	61	0	100.00%
pred. Tidak Investasi	1	38	97.44%
class recall	98.39%	100.00%	

Repository

Add Data

- Samples
- DB
- Local Repository (Eri Ahmad, H)
  - data (Eri Ahmad, H)
  - processes (Eri Ahmad, H)
  - contoh (Eri Ahmad, H - v1, 11/16/17)
- Cloud Repository (disconnected)

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## G. INVESTASI/ DM45 (TRANSFORM)

### 1. Decision Tree

accuracy: 95.00% +/- 5.00% (mikro: 95.00%)

	true Investasi	true Tidak Investasi	class precision
pred. Investasi	61	4	93.85%
pred. Tidak Investasi	1	34	97.14%
class recall	98.39%	89.47%	

### 2. Naïve Bayes

accuracy: 96.00% +/- 4.90% (mikro: 96.00%)

	true Investasi	true Tidak Investasi	class precision
pred. Investasi	61	3	95.31%
pred. Tidak Investasi	1	35	97.22%
class recall	98.39%	92.11%	

### 3. Neural Network

accuracy: 98.00% +/- 4.00% (mikro: 98.00%)

	true Investasi	true Tidak Investasi	class precision
pred. Investasi	61	1	98.39%
pred. Tidak Investasi	1	37	97.37%
class recall	98.39%	97.37%	