

Hesti Putri Utami

L200170009

Kelas A

Praktikum 1

The screenshot displays the RapidMiner Studio Free 9.3.001 interface. The top window shows a process design in the 'Design' view, featuring a flow from 'Retrieve DataCuaca_...' to 'Nominal to Numerical', then 'Perceptron', and finally 'Apply Model'. The 'Parameters' panel on the right shows settings for 'logverbosity' (init) and 'logfile'. The 'Help' panel provides a synopsis of the 'Process' operator.

The bottom window shows the 'Results' view for the 'ExampleSet (Apply Model)' operator. It displays a table with 7 rows of data, including predictions and confidence scores. The table is filtered to show 7 of 7 examples.

Row No.	prediction(B...	confidence(...	confidence(...	Cuaca = Cer...	Cuaca = Me...	Cuaca = Huj...	Berangin = T...	Berangin = YA	Suhu	Kelembaban...
1	TIDAK	1.000	0.000	1	0	0	1	0	75	65
2	TIDAK	1.000	0.000	1	0	0	0	1	80	68
3	TIDAK	1.000	0.000	1	0	0	0	1	83	87
4	TIDAK	1	0	0	1	0	1	0	70	96
5	TIDAK	1.000	0.000	0	1	0	1	0	68	81
6	TIDAK	1.000	0.000	0	0	1	0	1	65	75
7	TIDAK	1	0	0	0	1	0	1	64	85

ExampleSet (7 examples, 3 special attributes, 7 regular attributes)

Praktikum 2

The screenshot shows the RapidMiner Studio interface. The **Repository** panel on the left lists various data sources, including `DataCuaca_Training`. The **Process** panel in the center displays a workflow: `Retrieve DataCuaca_Training` (orange box) is connected to `Cross Validation` (yellow box). The `Cross Validation` operator has multiple output ports labeled `res`. The **Parameters** panel on the right shows the configuration for the `Retrieve DataCuaca_Training` operator, with the `repository entry` set to `yDataCuaca_Training`. The **Help** panel at the bottom right provides information about the `Retrieve` operator, including its tags and synopsis.

The screenshot shows a more complex process design in RapidMiner Studio. The **Process** panel is divided into **Training** and **Testing** sections. In the **Training** section, the workflow is: `Nominal to Numerical` (pink box) → `Neural Net` (green box) → `Apply Model` (light green box). In the **Testing** section, the workflow is: `Nominal to Numerical` (pink box) → `Apply Model` (light green box) → `Performance` (yellow box). The **Parameters** panel on the right shows the configuration for the `Performance (Performance (Classification))` operator, with the `main criterion` set to `first` and several performance metrics checked, including `accuracy`, `classification error`, `kappa`, `weighted mean recall`, `weighted mean precision`, and `spearman rho`. The **Help** panel at the bottom right provides information about the `Performance (Classification)` operator, including its tags and synopsis.

//Local Repository/prak 2* - RapidMiner Studio Free 9.3.001 @ LABSI-18-PC
 File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (/Local Repository/DataCuaca_Testing) x
 ExampleSet (/Local Repository/DataCuaca_Training) x
 ExampleSet (/Local Repository/Data_Training) x
 ExampleSet (/Local Repository/DataCuaca_Training) x

Result History PerformanceVector (Performance) ImprovedNeuralNet (Neural Net) ExampleSet (/Local Repository/Data_Testing)

Criterion accuracy
 Table View Plot View

accuracy: 50.00% +/- 47.14% (micro average: 57.14%)

	true TIDAK	true YA	class precision
pred. TIDAK	2	3	40.00%
pred. YA	3	6	66.67%
class recall	40.00%	66.67%	

Performance
 Description
 Annotations

Repository
 Training F
 Samples
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 Data_
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 DataC
 prak 1
 prak 2
 Tugas

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//Local Repository/prak 2* - RapidMiner Studio Free 9.3.001 @ LABSI-18-PC
 File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (/Local Repository/DataCuaca_Testing) x
 ExampleSet (/Local Repository/DataCuaca_Training) x
 ExampleSet (/Local Repository/Data_Training) x
 ExampleSet (/Local Repository/DataCuaca_Training) x

Result History PerformanceVector (Performance) ImprovedNeuralNet (Neural Net) ExampleSet (/Local Repository/Data_Testing)

Neural Net
 Description
 Annotations

Input Hidden 1 Output

Repository
 Training F
 Samples
 Commun
 DB (Legac
 Local Rep
 Conne
 data (L
 proces
 Data_
 Data_
 DataC
 DataC
 prak 1
 prak 2
 Tugas

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Windows taskbar: //Local Repository/prak 2* - RapidMiner Studio Free 9.3.001 @ LABSI-18-PC

Menu: File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (/Local Repository/DataCuaca_Testing) ExampleSet (/Local Repository/DataCuaca_Training) ExampleSet (/Local Repository/DataCuaca_Training) ExampleSet (/Local Repository/DataCuaca_Training)

Result History PerformanceVector (Performance) ImprovedNeuralNet (Neural Net) ExampleSet (/Local Repository/DataCuaca_Testing)

ImprovedNeuralNet

Neural Net

Description

Annotations

Hidden 1

Node 1 (Sigmoid)

Cuaca = Cerah: -0.646
Cuaca = Mendung: 0.985
Cuaca = Hujan: -0.127
Berangin = TIDAK: 0.491
Berangin = YA: -0.496
Suhu: -0.277
Kelembaban_udara: -0.596
Bias: -0.213

Node 2 (Sigmoid)

Cuaca = Cerah: -0.371
Cuaca = Mendung: 0.652
Cuaca = Hujan: -0.118
Berangin = TIDAK: 0.263
Berangin = YA: -0.292
Suhu: -0.178
Kelembaban_udara: -0.440
Bias: -0.114

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Windows taskbar: //Local Repository/prak 2* - RapidMiner Studio Free 9.3.001 @ LABSI-18-PC

Menu: File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (/Local Repository/DataCuaca_Testing) ExampleSet (/Local Repository/DataCuaca_Training) ExampleSet (/Local Repository/DataCuaca_Training) ExampleSet (/Local Repository/DataCuaca_Training)

Result History PerformanceVector (Performance) ImprovedNeuralNet (Neural Net) ExampleSet (/Local Repository/DataCuaca_Testing)

ImprovedNeuralNet

Neural Net

Description

Annotations

Node 3 (Sigmoid)

Cuaca = Cerah: -0.758
Cuaca = Mendung: 1.156
Cuaca = Hujan: -0.090
Berangin = TIDAK: 0.579
Berangin = YA: -0.633
Suhu: -0.310
Kelembaban_udara: -0.642
Bias: -0.197

Node 4 (Sigmoid)

Cuaca = Cerah: -1.035
Cuaca = Mendung: 1.411
Cuaca = Hujan: -0.099
Berangin = TIDAK: 0.826
Berangin = YA: -0.806
Suhu: -0.492
Kelembaban_udara: -0.708
Bias: -0.204

Node 5 (Sigmoid)

Cuaca = Cerah: -0.677
Cuaca = Mendung: 1.023
Cuaca = Hujan: -0.154
Berangin = TIDAK: 0.520

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Local Repository/prak 2 - RapidMiner Studio Free 9.3.001 @ LABSI-18-PC

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (/Local Repository/DataCuaca_Testing) ExampleSet (/Local Repository/DataCuaca_Training) ExampleSet (/Local Repository/DataCuaca_Training) ExampleSet (/Local Repository/DataCuaca_Training) ExampleSet (/Local Repository/DataCuaca_Testing)

Result History PerformanceVector (Performance) ImprovedNeuralNet (Neural Net)

Neural Net

Description

Annotations

Node 5 (Sigmoid)

Cuaca = Cerah: -0.677
Cuaca = Mendung: 1.023
Cuaca = Hujan: -0.154
Berangin = TIDAK: 0.520
Berangin = YA: -0.514
Suhu: -0.291
Kelembaban_udara: -0.628
Bias: -0.217

Node 6 (Sigmoid)

Cuaca = Cerah: -0.647
Cuaca = Mendung: 1.038
Cuaca = Hujan: -0.086
Berangin = TIDAK: 0.550
Berangin = YA: -0.495
Suhu: -0.290
Kelembaban_udara: -0.564
Bias: -0.236

Output

=====
Class 'TIDAK' (Sigmoid)

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File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (/Local Repository/DataCuaca_Testing) ExampleSet (/Local Repository/DataCuaca_Training) ExampleSet (/Local Repository/DataCuaca_Training) ExampleSet (/Local Repository/DataCuaca_Training) ExampleSet (/Local Repository/DataCuaca_Testing)

Result History PerformanceVector (Performance) ImprovedNeuralNet (Neural Net)

Neural Net

Description

Annotations

Berangin = YA: -0.495
Suhu: -0.290
Kelembaban_udara: -0.564
Bias: -0.236

Output

=====
Class 'TIDAK' (Sigmoid)

Node 1: -0.780
Node 2: -0.384
Node 3: -0.957
Node 4: -1.363
Node 5: -0.816
Node 6: -0.804
Threshold: 1.505

Class 'YA' (Sigmoid)

Node 1: 0.770
Node 2: 0.326
Node 3: 0.976
Node 4: 1.345
Node 5: 0.856
Node 6: 0.810
Threshold: -1.495

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Tugas

Local Repository/Tugas 1* - RapidMiner Studio Free 9.3.001 LABSI-18-PC

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators...etc All Studio

Repository

- Import Data
- processes (LABSI-18-PC)
- Data_Testing (LABSI-18-PC)
- Data_Training (LABSI-18-PC)
- DataCuaca_Testing (LABSI-18-PC)
- DataCuaca_Training (LABSI-18-PC)
- prak 1 (LABSI-18-PC)
- prak 2 (LABSI-18-PC)
- Tugas 1 (LABSI-18-PC)

Operators

performance

Predictive (7)

- Performance (Classification)
- Performance (Binomial)
- Performance (Regression)
- Performance (Costs)
- Performance (Ranking)

No results were found.

Process

Process

100%

Retrieve Data_Training

Nominal to Numerical

Perceptron

Apply Model

Retrieve Data_Testing

Nominal to Numerical

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

Activate Wisdom of Crowds

Parameters

Retrieve Data_Testing (Retrieve)

repository entry Data_Testing

Show advanced parameters

Help

Retrieve

RapidMiner Studio Core

Tags: Load Import Read Datasets Examples Example Set Table Repository Data Access

Synopsis

This Operator can access stored information in the Repository and load them into the Process.

Local Repository/Tugas 1* - RapidMiner Studio Free 9.3.001 LABSI-18-PC

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators...etc All Studio

ExampleSet (/Local Repository/DataCuaca_Training) ExampleSet (/Local Repository/DataCuaca_Testing) ExampleSet (/Local Repository/DataCuaca_Training)

Result History

ExampleSet (Apply Model) ExampleSet (/Local Repository/Data_Testing) ExampleSet (/Local Repository/Data_Training)

Open in Turbo Prep Auto Model

Filter (10 / 10 examples): all

Row No.	prediction(L...	confidence(L...	confidence(...	Jurusan_S...	Jurusan_S...	Jurusan_S...	Gender = W...	Gender = PR...	Asal_Sekola...	Asal_Sekola...	Asisten = TL...
1	TEPAT	0.462	0.538	1	0	0	1	0	1	0	1
2	TEPAT	0.385	0.615	0	1	0	0	1	1	0	0
3	TERLAMBAT	0.536	0.464	1	0	0	0	1	1	0	1
4	TERLAMBAT	0.579	0.421	0	0	1	0	1	0	1	1
5	TEPAT	0.465	0.535	1	0	0	1	0	1	0	1
6	TEPAT	0.325	0.675	0	1	0	1	0	0	1	0
7	TEPAT	0.458	0.542	0	1	0	0	1	1	0	1
8	TEPAT	0.455	0.545	0	1	0	0	1	1	0	1
9	TERLAMBAT	0.576	0.424	0	0	1	0	1	0	1	1
10	TEPAT	0.462	0.538	1	0	0	1	0	1	0	1

ExampleSet (10 examples, 3 special attributes, 10 regular attributes)

Asisten = YA	Rerata_Sek...
0	18
1	19
0	19
0	17
0	17
1	18
0	18
0	19
0	18
0	18

3. Perform Percept

PerformanceVector (Performance)

Table View Plot View

accuracy: 40.00% +/- 31.62% (micro average: 40.00%)

	true TERLAMBAT	true TEPAT	class precision
pred. TERLAMBAT	4	9	30.77%
pred. TEPAT	3	4	57.14%
class recall	57.14%	30.77%	

4. Neural Net

ExampleSet (Apply Model)

Open in Turbo Prep Auto Model

Filter (10 / 10 examples): all

Row No.	prediction(L...	confidence(L...	confidence(...	Jurusan_S...	Jurusan_S...	Jurusan_S...	Gender = W...	Gender = PR...	Asal_Sekola...	Asal_Sekola...	Asisten = TL...
1	TEPAT	0.331	0.669	1	0	0	1	0	1	0	1
2	TEPAT	0.027	0.973	0	1	0	0	1	1	0	0
3	TERLAMBAT	0.588	0.412	1	0	0	0	1	1	0	1
4	TERLAMBAT	0.679	0.321	0	0	1	0	1	0	1	1
5	TEPAT	0.399	0.601	1	0	0	1	0	1	0	1
6	TEPAT	0.032	0.968	0	1	0	1	0	0	1	0
7	TEPAT	0.399	0.601	0	1	0	0	1	1	0	1
8	TEPAT	0.325	0.675	0	1	0	0	1	1	0	1
9	TERLAMBAT	0.655	0.345	0	0	1	0	1	0	1	1
10	TEPAT	0.331	0.669	1	0	0	1	0	1	0	1

ExampleSet (10 examples, 3 special attributes, 10 regular attributes)

Asisten = YA	Rerata_Sek...
0	18
1	19
0	19
0	17
0	17
1	18
0	18
0	19
0	18
0	18

5. Performance Vector

The screenshot shows the RapidMiner Studio interface with the **PerformanceVector (Performance)** operator selected. The **Table View** is active, displaying the following performance metrics:

accuracy: 60.00% +/- 31.62% (micro average: 60.00%)

	true TERLAMBAT	true TEPAT	class precision
pred. TERLAMBAT	3	4	42.86%
pred. TEPAT	4	9	69.23%
class recall	42.86%	69.23%	

The interface also shows a sidebar with **Performance**, **Description**, and **Annotations** tabs. The bottom status bar indicates the time is 9:33 AM on 11/27/2019.

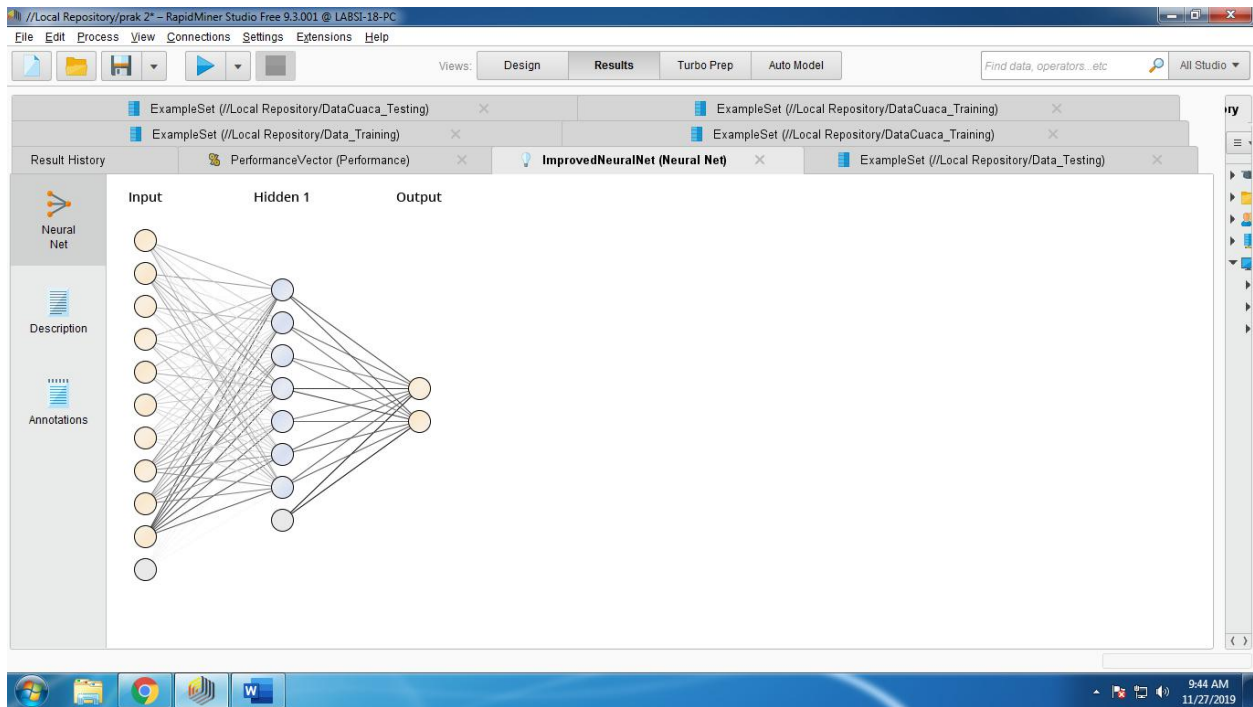
6.

The screenshot shows the RapidMiner Studio interface with a workflow diagram. The **Retrieve Data_Training** operator is connected to the **Cross Validation** operator. The **Parameters** panel on the right shows the **Retrieve Data_Training (Retrieve)** operator with the **repository entry** set to **Data_Training**. The **Help** panel on the right shows the **Retrieve** operator documentation.

The workflow diagram shows the **Retrieve Data_Training** operator (orange box) connected to the **Cross Validation** operator (yellow box). The **Cross Validation** operator has multiple output ports labeled **mod**, **exa**, **tes**, **per**, and **per**. The **Retrieve Data_Training** operator has an output port labeled **out**.

The **Parameters** panel on the right shows the **Retrieve Data_Training (Retrieve)** operator with the **repository entry** set to **Data_Training**. The **Help** panel on the right shows the **Retrieve** operator documentation.

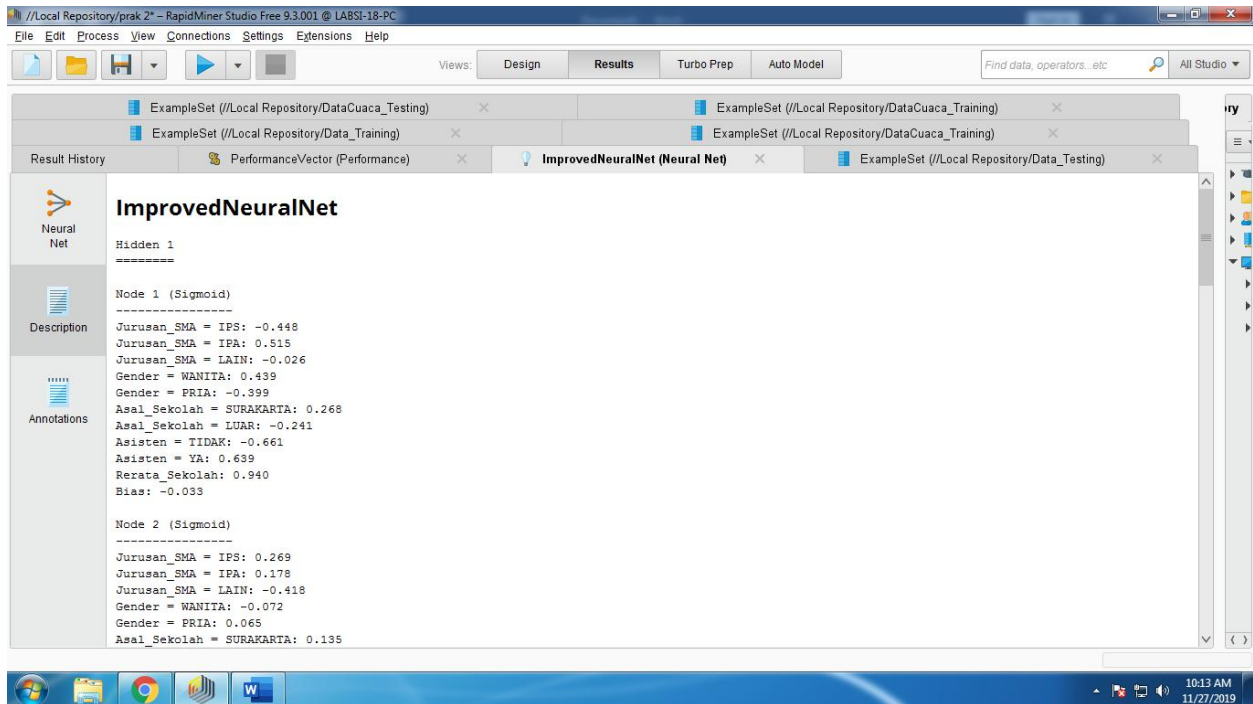
The bottom status bar indicates the time is 9:44 AM on 11/27/2019.



7.

- 1) Input Layer = 10 node
- 2) Hidden Layer = 7 node
- 3) Output = 2 node

8.



\\Local Repository/prak 2* - RapidMiner Studio Free 9.3.001 @ LABSI-18-PC

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (\\Local Repository/DataCuaca_Testing) ExampleSet (\\Local Repository/DataCuaca_Training)

ExampleSet (\\Local Repository/Data_Training) ExampleSet (\\Local Repository/DataCuaca_Training)

Result History PerformanceVector (Performance) ImprovedNeuralNet (Neural Net) ExampleSet (\\Local Repository/Data_Testing)

Neural Net

Description

Annotations

Node 2 (Sigmoid)

Jurusan_SMA = IPS: 0.269
Jurusan_SMA = IPA: 0.178
Jurusan_SMA = LAIN: -0.418
Gender = WANITA: -0.072
Gender = PRIA: 0.065
Asal_Sekolah = SURAKARTA: 0.135
Asal_Sekolah = LUAR: -0.166
Asisten = TIDAK: -0.420
Asisten = YA: 0.379
Rerata_Sekolah: 1.007
Bias: 0.025

Node 3 (Sigmoid)

Jurusan_SMA = IPS: -0.085
Jurusan_SMA = IPA: 0.282
Jurusan_SMA = LAIN: -0.208
Gender = WANITA: 0.195
Gender = PRIA: -0.157
Asal_Sekolah = SURAKARTA: 0.188
Asal_Sekolah = LUAR: -0.158
Asisten = TIDAK: -0.492
Asisten = YA: 0.477
Rerata_Sekolah: 0.863
Bias: -0.060

10:13 AM
11/27/2019

\\Local Repository/prak 2* - RapidMiner Studio Free 9.3.001 @ LABSI-18-PC

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (\\Local Repository/DataCuaca_Testing) ExampleSet (\\Local Repository/DataCuaca_Training)

ExampleSet (\\Local Repository/Data_Training) ExampleSet (\\Local Repository/DataCuaca_Training)

Result History PerformanceVector (Performance) ImprovedNeuralNet (Neural Net) ExampleSet (\\Local Repository/Data_Testing)

Neural Net

Description

Annotations

Node 4 (Sigmoid)

Jurusan_SMA = IPS: -0.486
Jurusan_SMA = IPA: 0.540
Jurusan_SMA = LAIN: -0.004
Gender = WANITA: 0.451
Gender = PRIA: -0.434
Asal_Sekolah = SURAKARTA: 0.251
Asal_Sekolah = LUAR: -0.282
Asisten = TIDAK: -0.599
Asisten = YA: 0.644
Rerata_Sekolah: 1.009
Bias: -0.055

Node 5 (Sigmoid)

Jurusan_SMA = IPS: 0.079
Jurusan_SMA = IPA: 0.202
Jurusan_SMA = LAIN: -0.284
Gender = WANITA: 0.085
Gender = PRIA: -0.068
Asal_Sekolah = SURAKARTA: 0.150
Asal_Sekolah = LUAR: -0.122
Asisten = TIDAK: -0.410
Asisten = YA: 0.448
Rerata_Sekolah: 0.951
Bias: 0.041

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11/27/2019

Local Repository/prak 2 - RapidMiner Studio Free 9.3.001 @ LABSI-18-PC

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (/Local Repository/DataCuaca_Testing) ExampleSet (/Local Repository/DataCuaca_Training)

ExampleSet (/Local Repository/Data_Training) ExampleSet (/Local Repository/DataCuaca_Training)

Result History PerformanceVector (Performance) ImprovedNeuralNet (Neural Net) ExampleSet (/Local Repository/Data_Testing)

Neural Net

Description

Annotations

Node 6 (Sigmoid)

Jurusan_SMA = IPS: -0.173
Jurusan_SMA = IPA: 0.382
Jurusan_SMA = LAIN: -0.133
Gender = WANITA: 0.248
Gender = PRIA: -0.236
Asal_Sekolah = SURAKARTA: 0.201
Asal_Sekolah = LUAR: -0.222
Asisten = TIDAK: -0.587
Asisten = YA: 0.549
Rerata_Sekolah: 0.962
Bias: 0.023

Node 7 (Sigmoid)

Jurusan_SMA = IPS: -0.397
Jurusan_SMA = IPA: 0.486
Jurusan_SMA = LAIN: 0.023
Gender = WANITA: 0.411
Gender = PRIA: -0.430
Asal_Sekolah = SURAKARTA: 0.187
Asal_Sekolah = LUAR: -0.217
Asisten = TIDAK: -0.577
Asisten = YA: 0.646
Rerata_Sekolah: 0.878
Bias: -0.036

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Local Repository/prak 2 - RapidMiner Studio Free 9.3.001 @ LABSI-18-PC

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (/Local Repository/DataCuaca_Testing) ExampleSet (/Local Repository/DataCuaca_Training)

ExampleSet (/Local Repository/Data_Training) ExampleSet (/Local Repository/DataCuaca_Training)

Result History PerformanceVector (Performance) ImprovedNeuralNet (Neural Net) ExampleSet (/Local Repository/Data_Testing)

Neural Net

Description

Annotations

Rerata_Sekolah: 0.878
Bias: -0.036

Output

=====
Class 'TERLAMBAT' (Sigmoid)

Node 1: -0.961
Node 2: -0.814
Node 3: -0.681
Node 4: -0.983
Node 5: -0.718
Node 6: -0.864
Node 7: -0.862
Threshold: 1.265

Class 'TEPAT' (Sigmoid)

Node 1: 0.956
Node 2: 0.762
Node 3: 0.705
Node 4: 0.995
Node 5: 0.742
Node 6: 0.844
Node 7: 0.861
Threshold: -1.257

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9. Kesimpulanya

Akurasi Neural lebih besar dari perceptron

