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NIM : L200170057

Kelas : C

MODUL 9

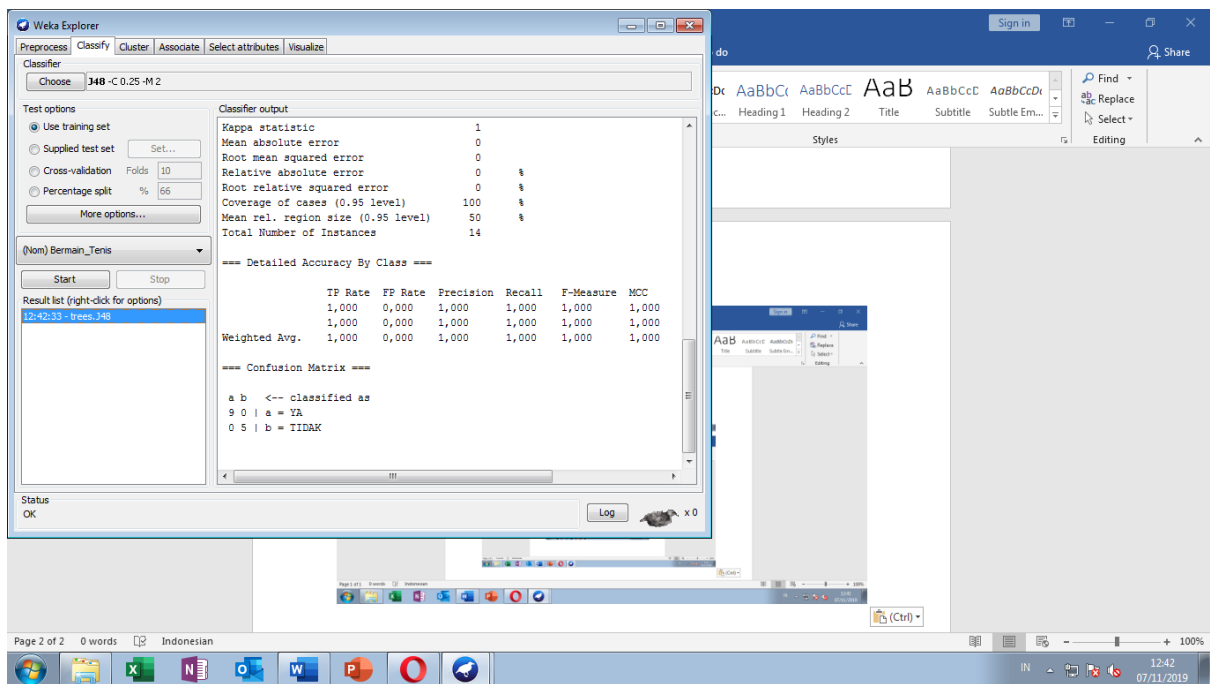
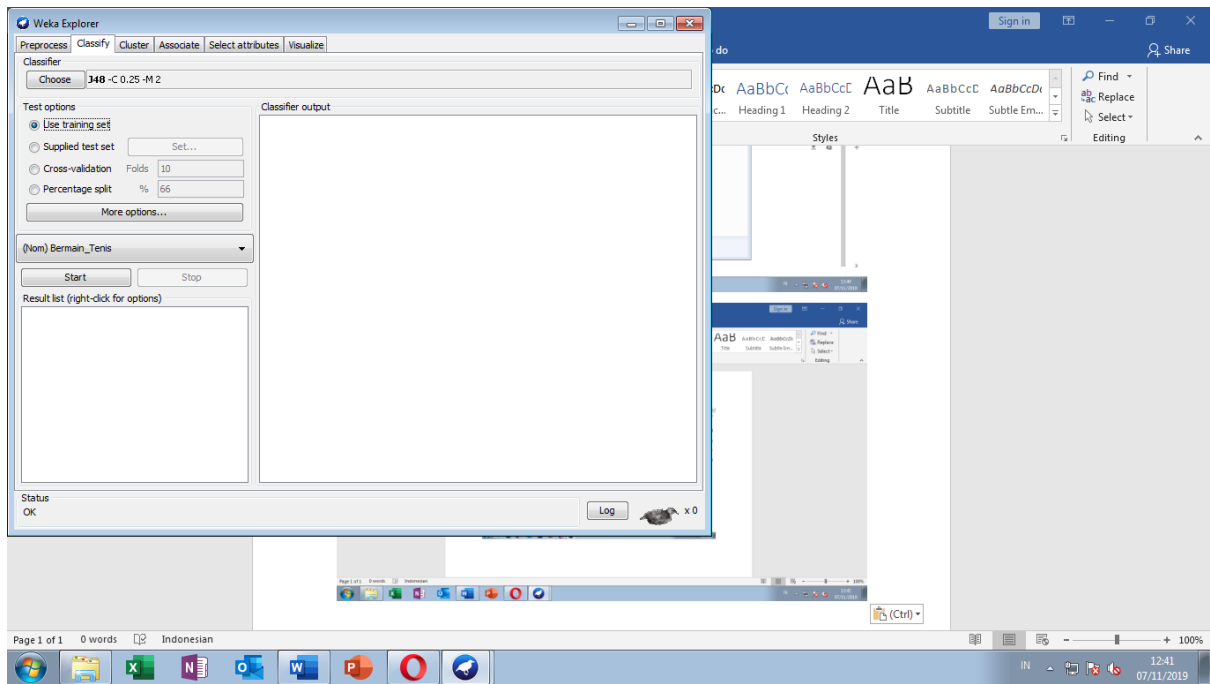
LANGKAH – LANGKAH PRAKTIKUM

POHON KEPUTUSAN MENGGUNAKAN WEKA

The screenshot displays the Weka Explorer interface, which is used for data mining tasks. The 'Preprocess' tab is active, showing the 'Cucaca' dataset. The 'Attributes' list on the left includes 'Cucaca', 'Suhu', 'Kelembaban_Udara', 'Berangin', and 'Bermain_Tenis'. The 'Selected attribute' table shows the following data:

No.	Label	Count	Weight
1	Cerah	5	5.0
2	Mendung	4	4.0
3	Hujan	5	5.0

The 'Class: Bermain_Tenis (Nom)' is selected, and a bar chart visualizes the distribution of the class. The 'Classifier' tab is also visible, showing a list of classifiers including 'DecisionStump', 'LMT', 'MSP', 'RandomForest', 'RandomTree', and 'REPTree'. The 'Output' window is open, displaying the results of the classification process. The taskbar at the bottom shows the Windows operating system with various application icons.



Weka Explorer

Preprocess Classify Cluster Associate Select attributes Visualize

Classifier: Choose **J48 -C 0.25 -M 2**

Test options:

- ☒ Use training set
- ☐ Supplied test set (Set...)
- ☐ Cross-validation (Folds: 10)
- ☐ Percentage split (%: 66)
- More options...

(Nom) Bermain_Tenis

Start Stop

Result list (right-click for options)

12:42:33 - trees.J48

Classifier output:

J48 pruned tree

```

Cuaca = Cerah
| Kelembaban_Udara <= 75: YA (2.0)
| Kelembaban_Udara > 75: TIDAK (3.0)
Cuaca = Mendung: YA (4.0)
Cuaca = Hujan
| Berangin = YA: TIDAK (2.0)
| Berangin = TIDAK: YA (3.0)

```

Number of Leaves : 5
Size of the tree : 8

Time taken to build model: 0.01 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0.01 seconds

=== Summary ===

Correctly Classified Instances	14	100	%
Incorrectly Classified Instances	0	0	%
Kappa statistic	1		
Mean absolute error	0		
Root mean squared error	0		
Relative absolute error	0	%	
Root relative squared error	0	%	
Coverage of cases (0.95 level)	100	%	
Mean rel. region size (0.95 level)	50	%	

Status: OK

Log

Weka Explorer

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Status: OK

Log

Context menu for 12:42:33 - trees.J48:

- View in main window
- View in separate window
- Save result buffer
- Delete result buffer
- Load model
- Save model
- Re-evaluate model on current test set
- Re-apply this model's configuration
- Visualize classifier errors
- Visualize tree**
- Visualize margin curve
- Visualize threshold curve
- Cost/Benefit analysis
- Visualize cost curve

Weka Classifier Tree Visualizer: 12:42:33 - trees.J48 (Cuaca)

Tree View

```
graph TD
    Cuaca -- "= Cerah" --> Kelembaban_Udara
    Cuaca -- "= Mendung" --> YA_4_0["YA (4.0)"]
    Cuaca -- "= Hujan" --> Berangin
    Kelembaban_Udara -- "<= 75" --> YA_2_0["YA (2.0)"]
    Kelembaban_Udara -- "> 75" --> TIDAK_3_0["TIDAK (3.0)"]
    Berangin -- "= YA" --> TIDAK_2_0["TIDAK (2.0)"]
    Berangin -- "= TIDAK" --> YA_3_0["YA (3.0)"]
```

Document1 - Word

Paragraph

Styles

Page 3 of 3 0 words Indonesian

12:44 07/11/2019

The screenshot displays the RapidMiner Studio Free 9.3.001 interface. The top window, titled '<new process>' - RapidMiner Studio Free 9.3.001 @ LABSI-03-PC, shows the 'Start a new project' dialog. This dialog offers several templates to start from, including 'Blank', 'Turbo Prep', 'Auto Model', 'Churn Modeling', 'Direct Marketing', 'Credit Risk Modeling', 'Market Basket Analysis', 'Predictive Maintenance', 'Price Risk Clustering', 'Lift Chart', 'Operationalization', 'Outlier Detection', 'Geographic Distances', 'Medical Fraud Detection', and 'Web Analytics'. The 'Blank' template is highlighted.

The bottom window, titled '<new process>' - RapidMiner Studio Free 9.3.001 @ LABSI-03-PC, shows the main interface. The 'Repository' pane on the left lists the 'Local Repository (LABSI-03)' with various data sources. The 'Process' pane in the center shows a workflow diagram with 'Retrieve data_cuaca...' and 'Cross Validation' operators. The 'Parameters' pane on the right shows the 'Process' operator settings, including 'logverbosity' set to 'init' and 'logfile' set to a folder. The 'Help' pane on the right provides information about the 'Process' operator.

Document1 - Word

Sign in

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

Repository

Import Data

DB (Legacy)

Local Repository (LABSI-03)

Connections (LABSI-03)

data (LABSI-03)

processes (LABSI-03)

data_cuaca_testing (LABSI-03)

data_cuaca_training (LABSI-03)

Operators

performance

Predictive (7)

Performance (Classification)

Performance (Binomial)

Performance (Regression)

Performance (Costs)

Performance (Ranking)

We found "Model Management" in the Marketplace. [Show me!](#)

Process

Process > Cross Validation

100%

Training

Decision Tree

Testing

Apply Model

Performance

Parameters

Cross Validation

leave one out

number of folds 10

sampling type automatic

Show advanced parameters

Change compatibility (9.3.001)

Help

Cross Validation

Concurrency

Tags: Cross-Validations, Cross-validation, Folds, K-Folds, K-folds, Validations, Estimations, Evaluations, Performance, Splitting, X-Validation, X-Prediction, Validation

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

Activate Wisdom of Crowds

Page 4 of 4

12:59 07/11/2019

Document1 - Word

Sign in

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

Repository

Import Data

DB (Legacy)

Local Repository (LABSI-03)

Connections (LABSI-03)

data (LABSI-03)

processes (LABSI-03)

data_cuaca_testing (LABSI-03)

data_cuaca_training (LABSI-03)

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Process

Process > Cross Validation

100%

Training

Decision Tree

Testing

Apply Model

Performance

Parameters

Decision Tree

criterion gain_ratio

maximal depth 10

apply pruning

confidence 0.1

apply prepruning

minimal gain 0.01

Show advanced parameters

Help

Decision Tree

Concurrency

Tags: Supervised, Classification, Regression, Model, Trees

Synopsis

This Operator generates a decision

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

Activate Wisdom of Crowds

Page 5 of 5

13:00 07/11/2019

Document1 - Word

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

Repository

- DB (Legacy)
- Local Repository (LABSI-03)
 - Connections (LABSI-03)
 - data (LABSI-03)
 - processes (LABSI-03)
 - data_cuaca_testing (LABSI-03)
 - data_cuaca_training (LABSI-03)

Operators

performance

- Predictive (7)
 - Performance (Classification)
 - Performance (Binomial)
 - Performance (Regression)
 - Performance (Costs)
 - Performance (Ranking)

We found "Model Management" in the Marketplace. [Show me!](#)

Process

Process > Cross Validation

100%

Training

Decision Tree

Testing

Apply Model

Performance

Parameters

Decision Tree

criterion information_...

maximal depth 10

☒ apply pruning

confidence 0.1

☒ apply prepruning

minimal gain 0.01

minimal leaf size 2

minimal size for s... 4

number of prepru... 3

[Hide advanced parameters](#)

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

☒ Activate Wisdom of Crowds

Page 5 of 5

13:01 07/11/2019

Document1 - Word

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

Repository

- DB (Legacy)
- Local Repository (LABSI-03)
 - Connections (LABSI-03)
 - data (LABSI-03)
 - processes (LABSI-03)
 - data_cuaca_testing (LABSI-03 - v1)
 - data_cuaca_training (LABSI-03 - v1)

Performance

Criterion accuracy

Description

Annotations

Result History

ExampleSet (//Local Repository/data_cuaca_training)

ExampleSet (//Local Repository/data_cuaca_testing)

PerformanceVector (Performance)

Tree (Decision Tree)

Table View Plot View

accuracy: 40.00% +/- 45.95% (micro average: 50.00%)

	true TIDAK	true YA	class precision
pred. TIDAK	1	4	20.00%
pred. YA	3	6	66.67%
class recall	25.00%	60.00%	

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Document1 - Word

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model

Find data, operators, etc. All Studio

ExampleSet (/Local Repository/data_cuaca_training) ExampleSet (/Local Repository/data_cuaca_testing) ExampleSet (/Local Repository/data_cuaca_testing)

Result History PerformanceVector (Performance) Tree (Decision Tree)

Zoom

Tree

☒ Node Labels ☒ Edge Labels

Description Annotations

Graph

Repository

Import Data

Training Resources (connected)

Samples

Community Samples (connected)

DB (Legacy)

Local Repository (LABSI-03)

Connections (LABSI-03)

data (LABSI-03)

processes (LABSI-03)

data_cuaca_testing (LABSI-03 - v1)

data_cuaca_training (LABSI-03 - v1)

Cuaca

Cerah Hujan Mendung

Kelembaban_udara Berangin

> 77.50 <= 77.50

TIDAK YA

YA TIDAK

YA TIDAK

YA

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13:02 07/11/2019