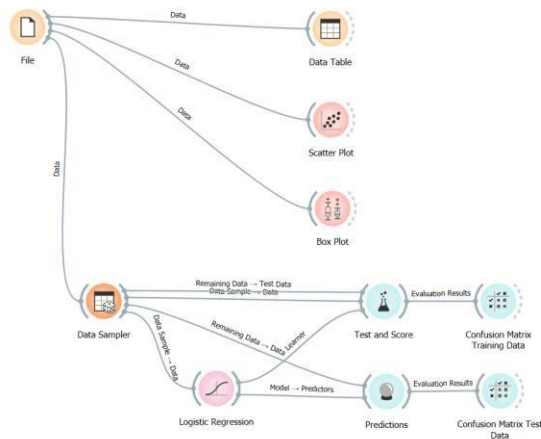


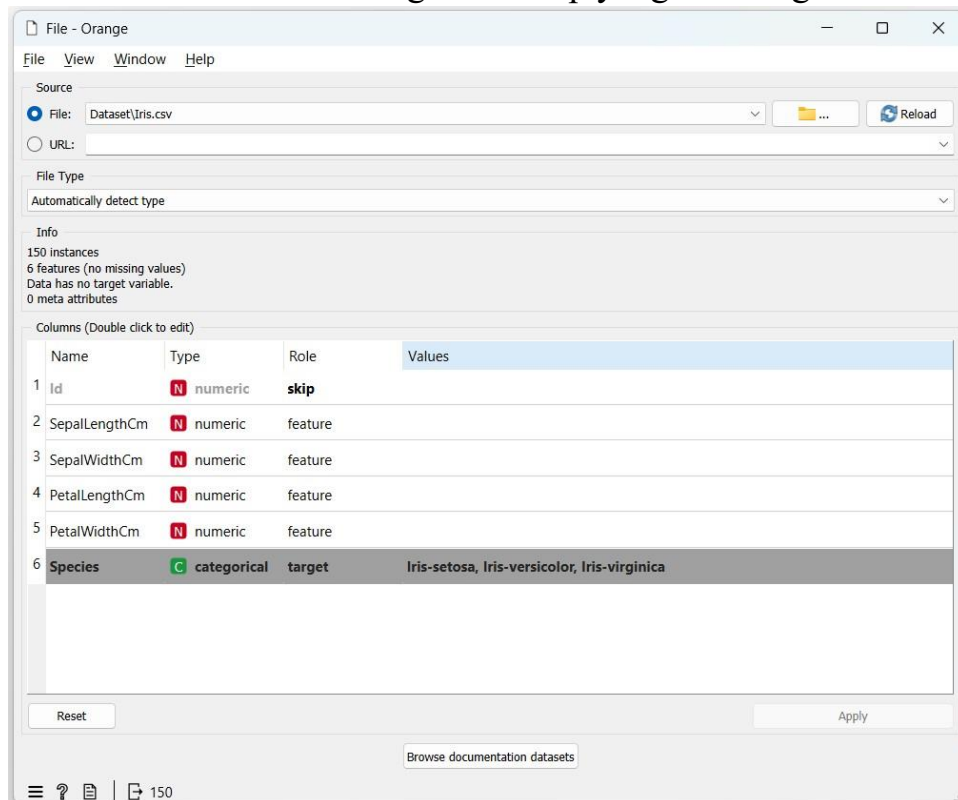
Orange Minggu 2

Nama : Ferdinand Hutajulu

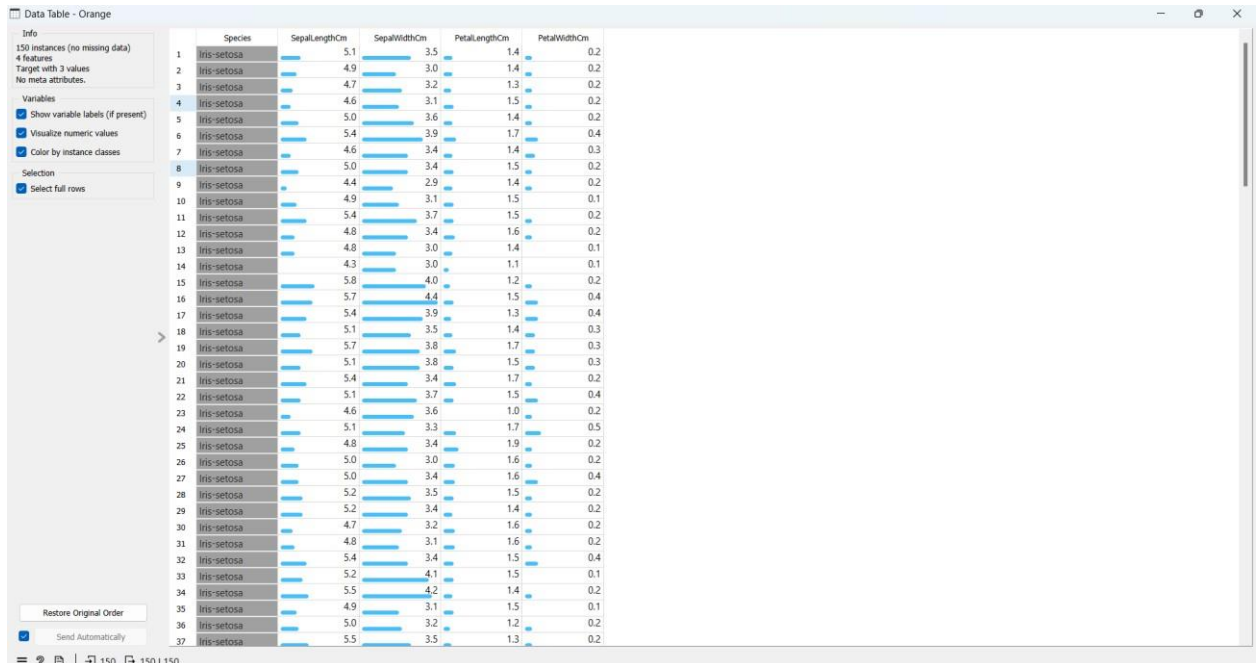
NIM : 1103213120



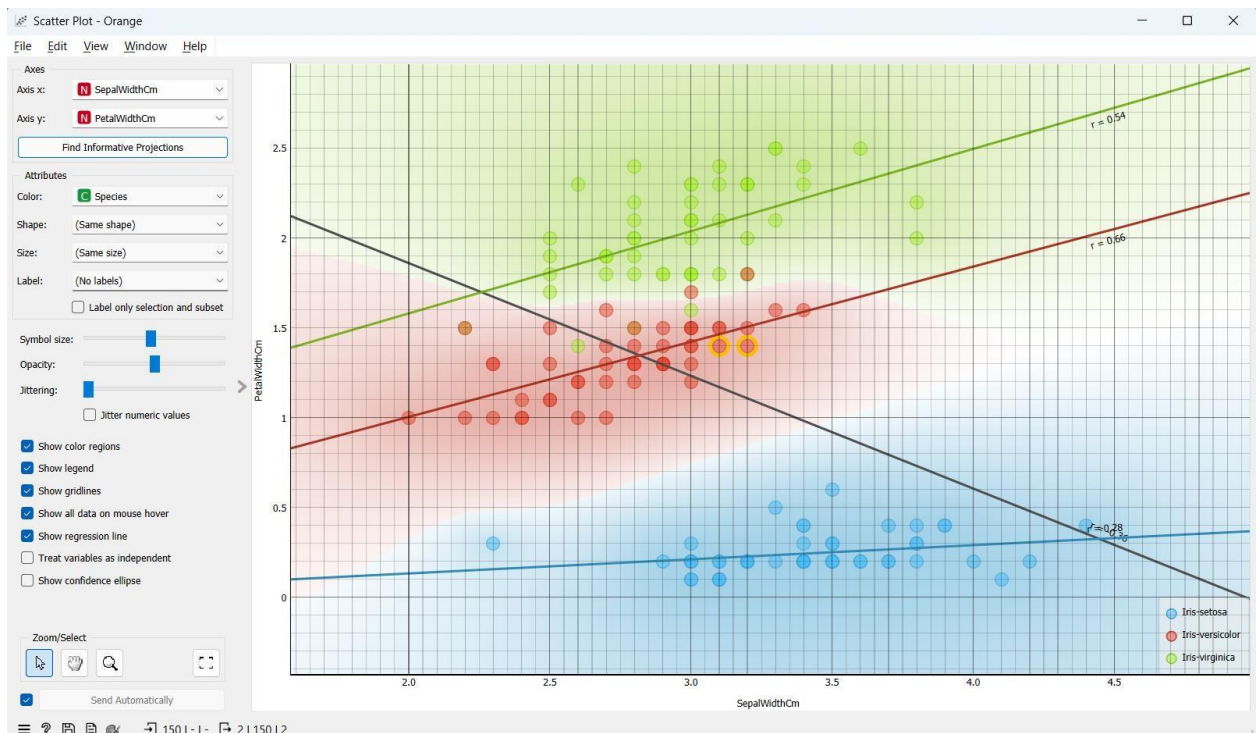
1. Memuat dataset dan set target dan skip yang tidak digunakan



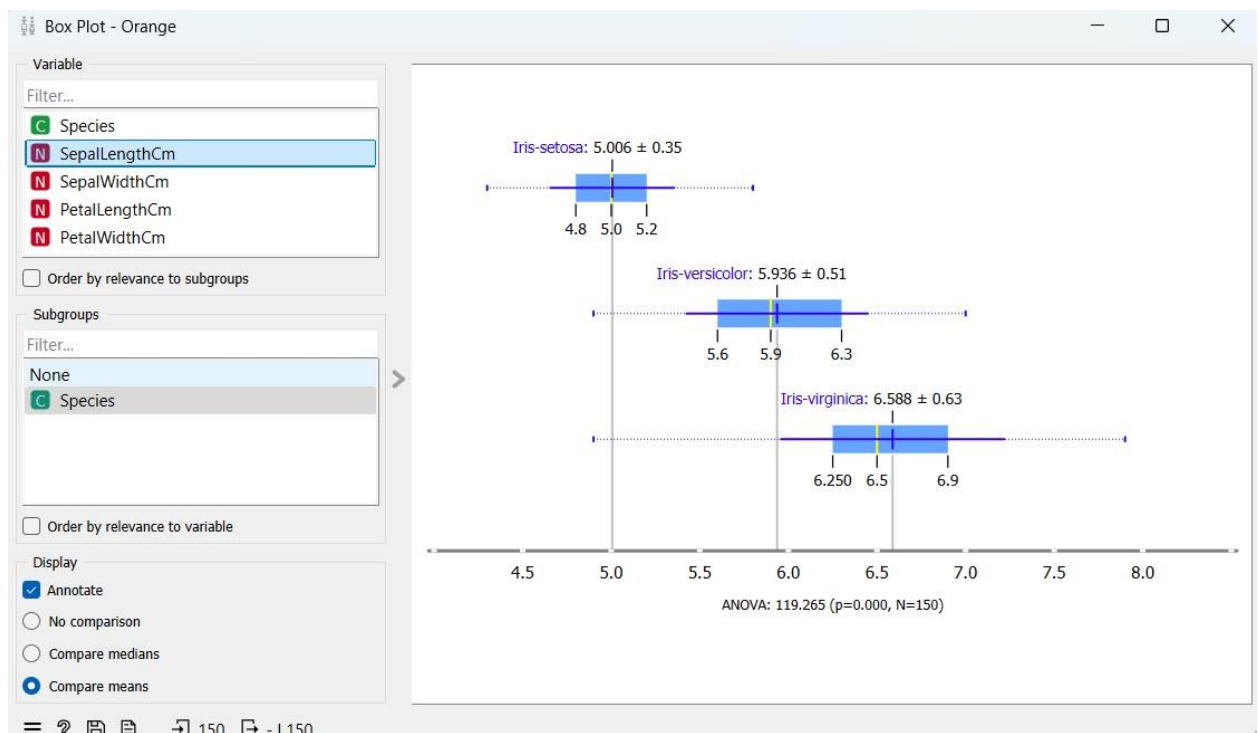
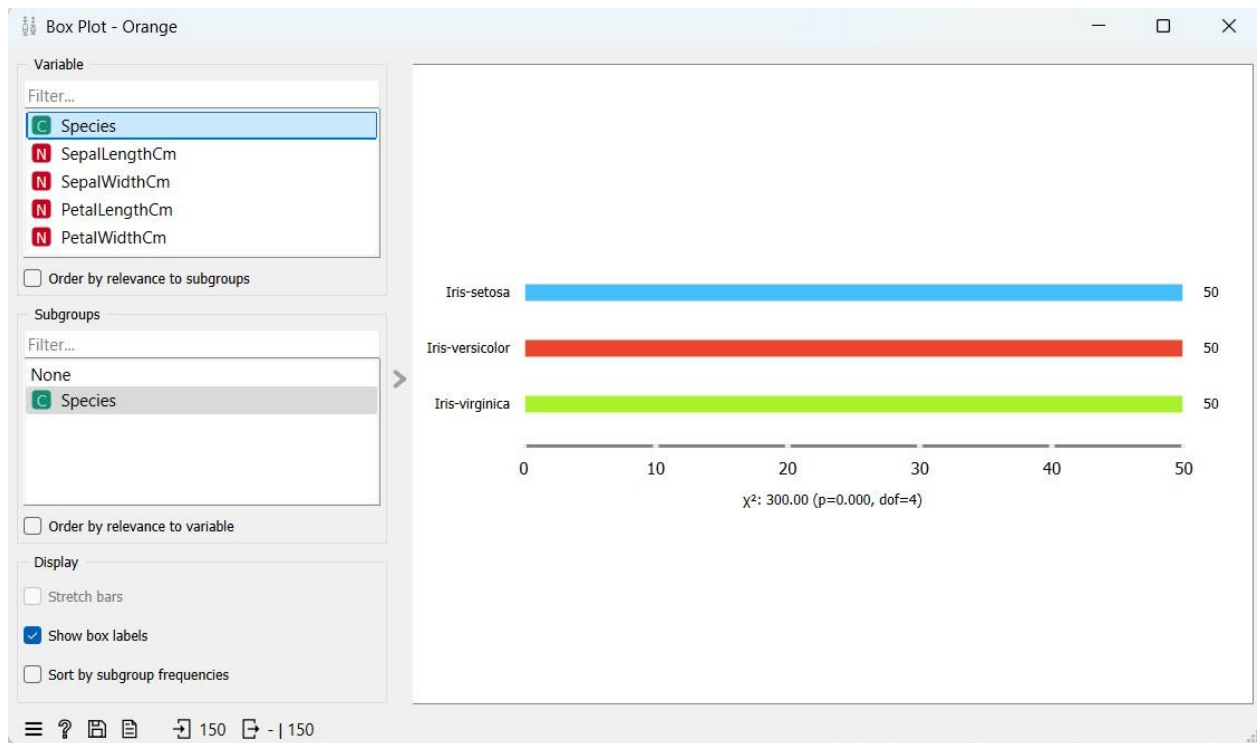
2. Memeriksa isi dataset menggunakan fungsi data table



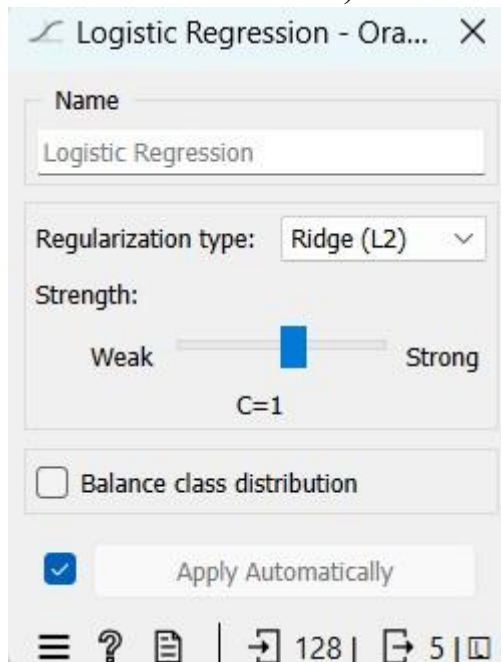
3. Memeriksa sebaran data menggunakan scatter plot Memeriksa outliers dalam dataset menggunakan box plot



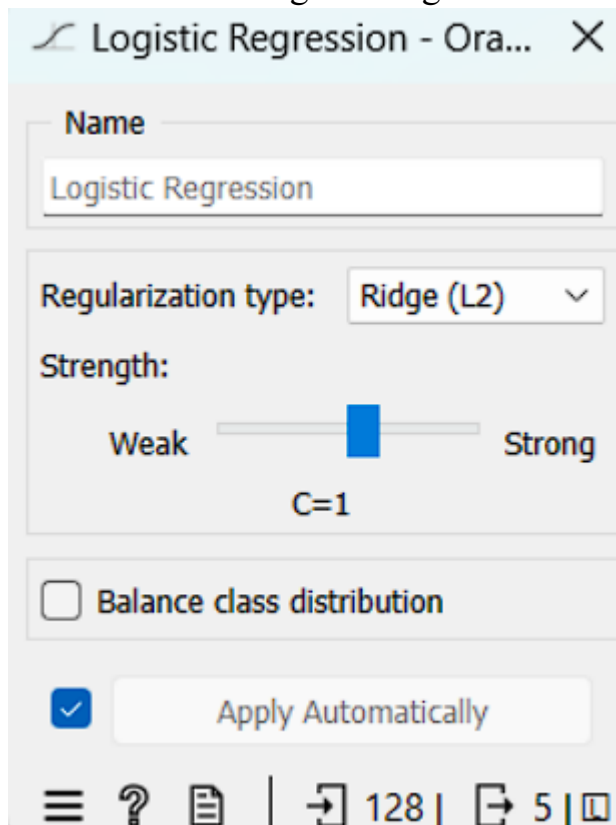
4. Memeriksa outliers dalam dataset menggunakan box plot



5. Membagi dataset menjadi training data dan test data (85% training data dan 15% test data)



6. Memuat Model Logistic Regression



7. Melakukan pelatihan model dan memeriksa hasilnya

Test and Score - Orange

File Edit View Window Help

☒ Cross validation

Number of folds: 5

☒ Stratified

☐ Cross validation by feature

☐ Random sampling

Repeat train/test: 10

Training set size: 66 %

☒ Stratified

☐ Leave one out

☐ Test on train data

☐ Test on test data

Evaluation results for target (None, show average over classes)

Model	AUC	CA	F1	Prec	Recall	MCC
Logistic Regression	0.997	0.953	0.953	0.954	0.953	0.930

Compare models by: Area under ROC curve

Negligible diff.: 0.1

Logistic Regression

Table shows probabilities that the score for the model in the row is higher than that of the model in the column. Small numbers show the probability that the difference is negligible.

8. Melakukan visualisasi pada hasil training menggunakan confusion matrix

Confusion Matrix Training Data - Orange

Learners

Logistic Regression

Output

☒ Predictions

☐ Probabilities

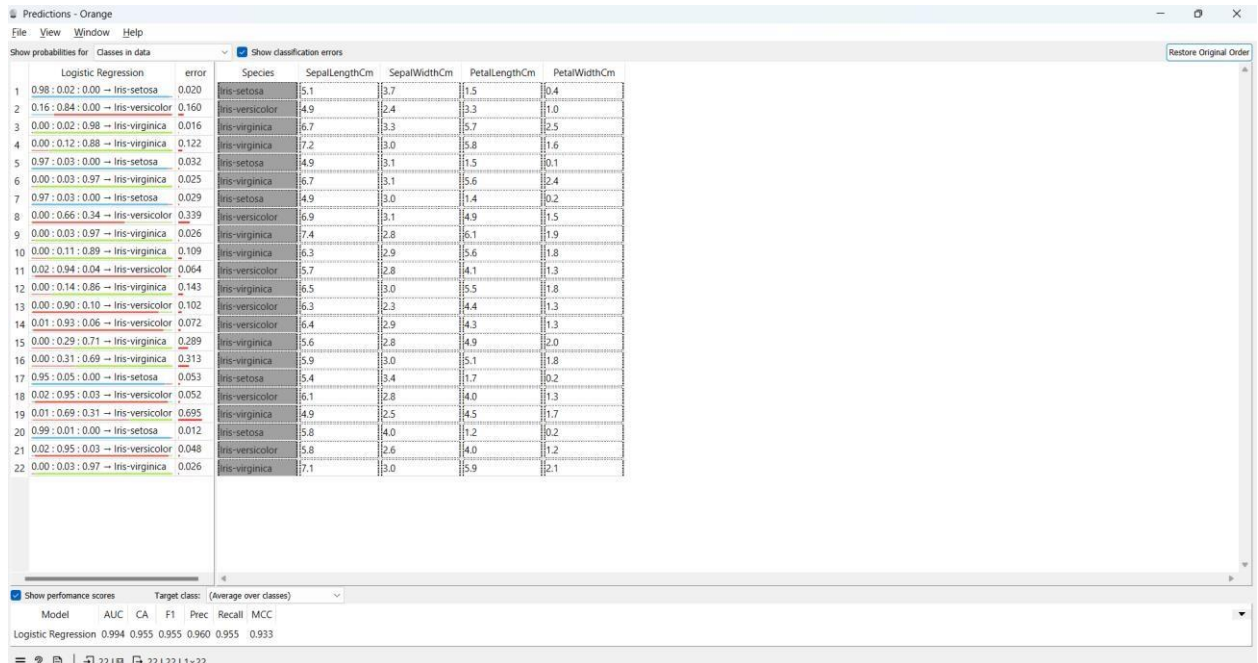
☒ Apply Automatically

Show: Number of instances

		Predicted			Σ
		Iris-setosa	Iris-versicolor	Iris-virginica	
Actual	Iris-setosa	45	0	0	45
	Iris-versicolor	0	41	2	43
	Iris-virginica	0	4	36	40
Σ		45	45	38	128

Select Correct Select Misclassified Clear Selection

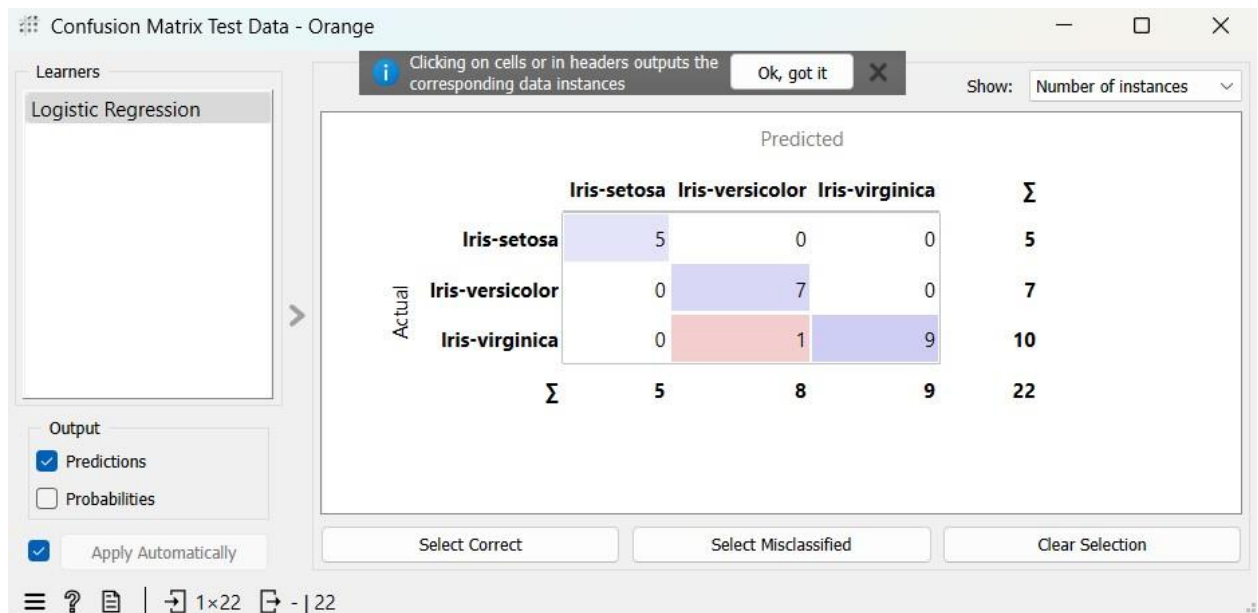
9. Melakukan prediksi dan membandingkan hasilnya dengan test data



	Logistic Regression	error	Species	Sepal.LengthCm	Sepal.WidthCm	Petal.LengthCm	Petal.WidthCm
1	0.98 : 0.02 : 0.00 → Iris-setosa	0.020	Iris-setosa	5.1	3.7	1.5	0.4
2	0.16 : 0.84 : 0.00 → Iris-versicolor	0.160	Iris-versicolor	4.9	2.4	3.3	1.0
3	0.00 : 0.02 : 0.98 → Iris-virginica	0.016	Iris-virginica	6.7	3.3	5.7	2.5
4	0.00 : 0.12 : 0.88 → Iris-virginica	0.122	Iris-virginica	7.2	3.0	5.8	1.6
5	0.97 : 0.03 : 0.00 → Iris-setosa	0.032	Iris-setosa	4.9	3.1	1.5	0.1
6	0.00 : 0.03 : 0.97 → Iris-virginica	0.025	Iris-virginica	6.7	3.1	5.6	2.4
7	0.97 : 0.03 : 0.00 → Iris-setosa	0.029	Iris-setosa	4.9	3.0	1.4	0.2
8	0.00 : 0.66 : 0.34 → Iris-versicolor	0.339	Iris-versicolor	6.9	3.1	4.9	1.5
9	0.00 : 0.03 : 0.97 → Iris-virginica	0.026	Iris-virginica	7.4	2.8	6.1	1.9
10	0.00 : 0.11 : 0.89 → Iris-virginica	0.109	Iris-virginica	6.3	2.9	5.6	1.8
11	0.02 : 0.94 : 0.04 → Iris-versicolor	0.064	Iris-versicolor	5.7	2.8	4.1	1.3
12	0.00 : 0.14 : 0.86 → Iris-virginica	0.143	Iris-virginica	6.5	3.0	5.5	1.8
13	0.00 : 0.90 : 0.10 → Iris-versicolor	0.102	Iris-versicolor	6.3	2.3	4.4	1.3
14	0.01 : 0.93 : 0.06 → Iris-versicolor	0.072	Iris-versicolor	6.4	2.9	4.3	1.3
15	0.00 : 0.29 : 0.71 → Iris-virginica	0.289	Iris-virginica	5.6	2.8	4.9	2.0
16	0.00 : 0.31 : 0.69 → Iris-virginica	0.313	Iris-virginica	5.9	3.0	5.1	1.8
17	0.95 : 0.05 : 0.00 → Iris-setosa	0.053	Iris-setosa	5.4	3.4	1.7	0.2
18	0.02 : 0.95 : 0.03 → Iris-versicolor	0.052	Iris-versicolor	6.1	2.8	4.0	1.3
19	0.01 : 0.69 : 0.31 → Iris-versicolor	0.695	Iris-virginica	4.9	2.5	4.5	1.7
20	0.99 : 0.01 : 0.00 → Iris-setosa	0.012	Iris-setosa	5.8	4.0	1.2	0.2
21	0.02 : 0.95 : 0.03 → Iris-versicolor	0.048	Iris-versicolor	5.8	2.6	4.0	1.2
22	0.00 : 0.03 : 0.97 → Iris-virginica	0.026	Iris-virginica	7.1	3.0	5.9	2.1

Logistic Regression 0.994 0.955 0.955 0.960 0.955 0.933

10. Melihat hasil prediksi menggunakan test data dengan visualisasi menggunakan confusion matrix



		Predicted			
		Iris-setosa	Iris-versicolor	Iris-virginica	Σ
Actual	Iris-setosa	5	0	0	5
	Iris-versicolor	0	7	0	7
	Iris-virginica	0	1	9	10
Σ		5	8	9	22

Select Correct Select Misclassified Clear Selection

