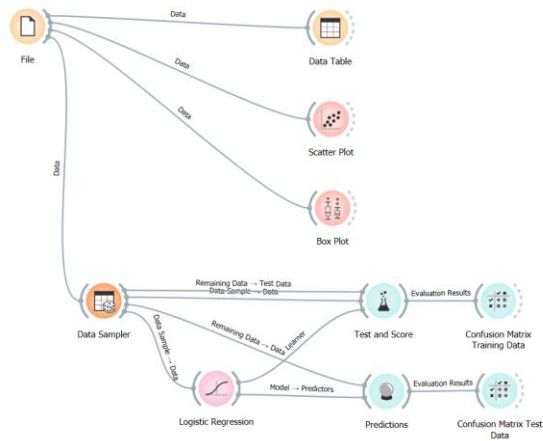


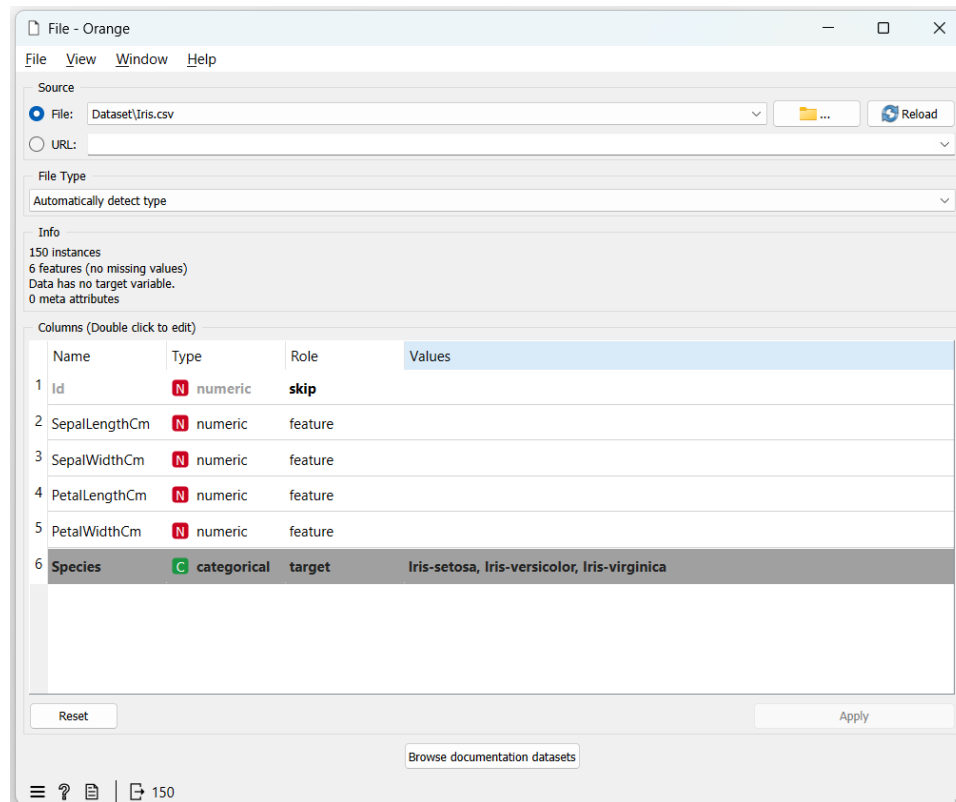
Orange Minggu 2

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NIM : 1103213005



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



2. Memeriksa isi dataset menggunakan fungsi data table

Data Table - Orange

Info
150 instances (no missing data)
4 features
Target with 3 values
No meta attributes.

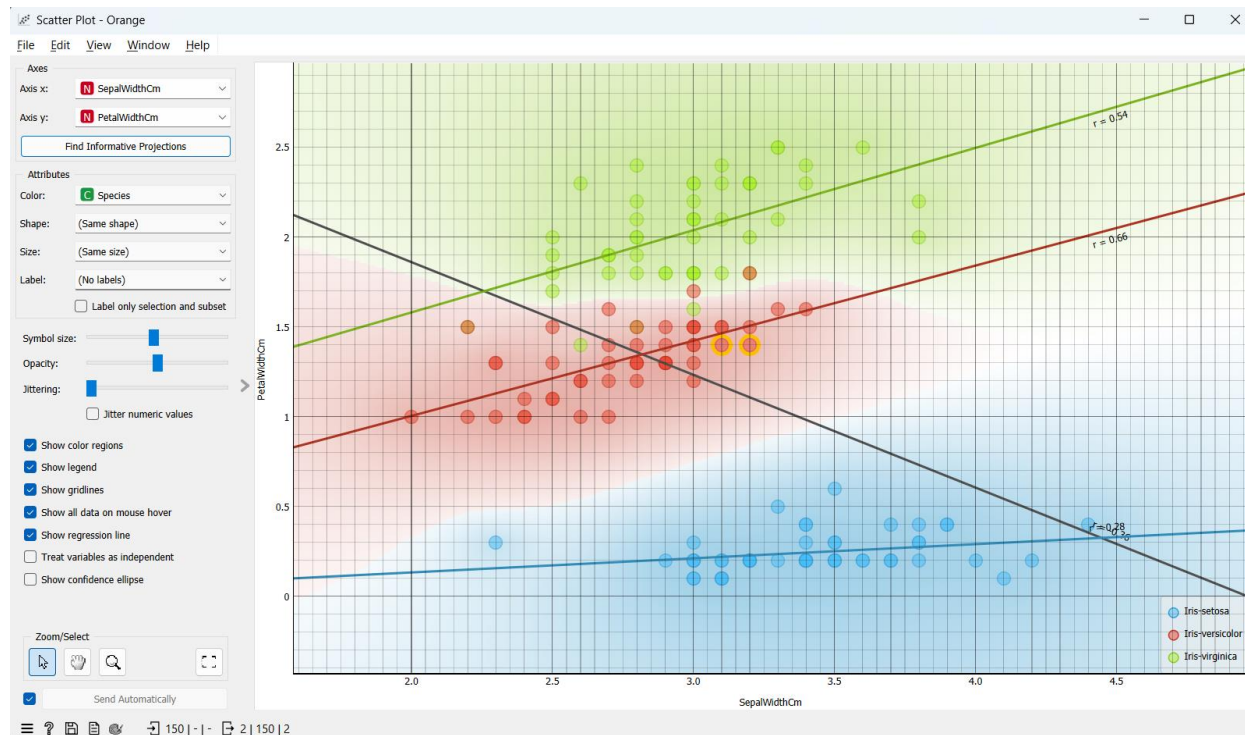
Variables
☒ Show variable labels (if present)
☒ Visualize numeric values
☒ Color by instance classes

Selection
☒ Select full rows

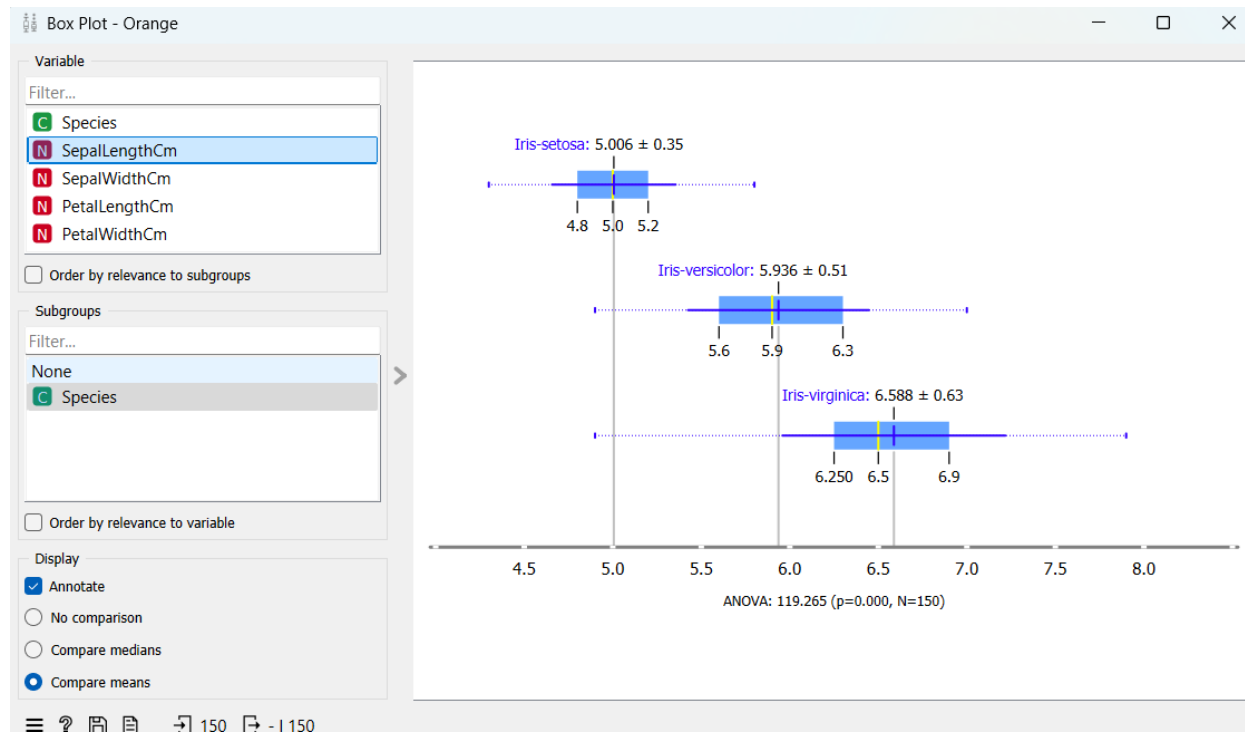
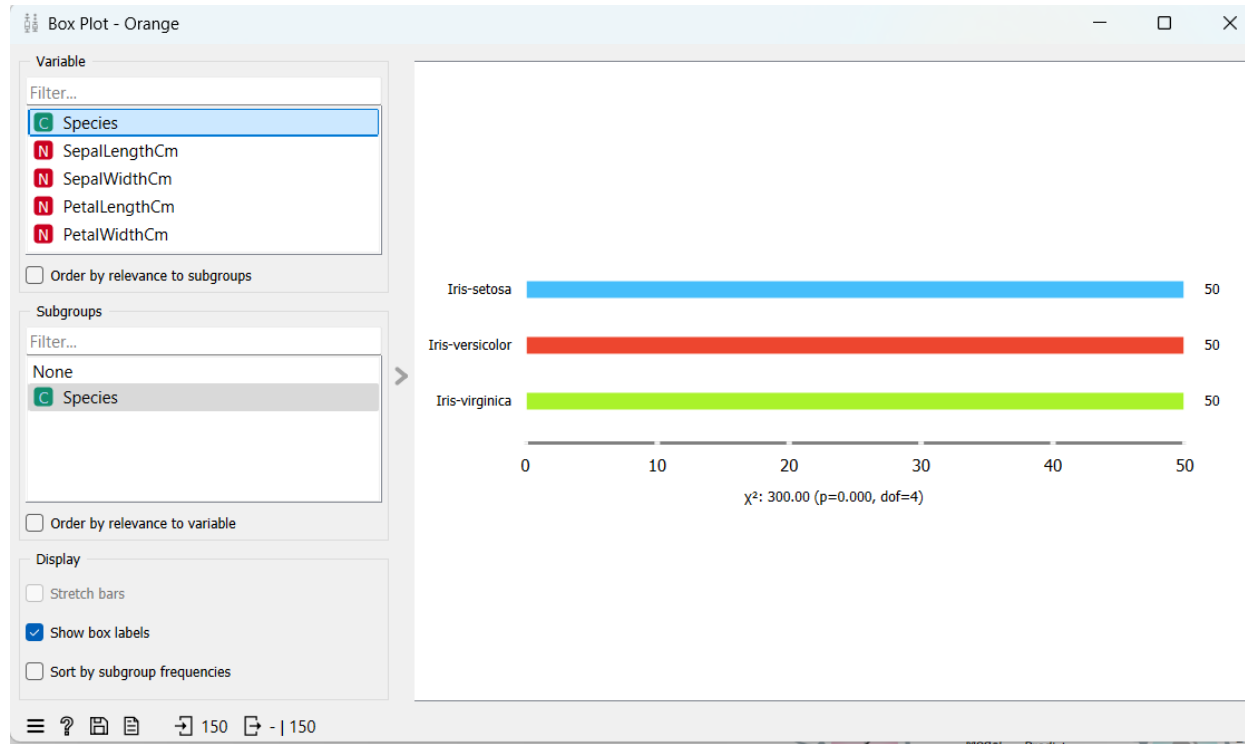
Restore Original Order
☒ Send Automatically

	Species	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
1	Iris-setosa	5.1	3.5	1.4	0.2
2	Iris-setosa	4.9	3.0	1.4	0.2
3	Iris-setosa	4.7	3.2	1.3	0.2
4	Iris-setosa	4.6	3.1	1.5	0.2
5	Iris-setosa	5.0	3.6	1.4	0.2
6	Iris-setosa	5.4	3.9	1.7	0.4
7	Iris-setosa	4.6	3.4	1.4	0.3
8	Iris-setosa	5.0	3.4	1.5	0.2
9	Iris-setosa	4.4	2.9	1.4	0.2
10	Iris-setosa	4.9	3.1	1.5	0.1
11	Iris-setosa	5.4	3.7	1.5	0.2
12	Iris-setosa	4.8	3.4	1.6	0.2
13	Iris-setosa	4.8	3.0	1.4	0.1
14	Iris-setosa	4.3	3.0	1.1	0.1
15	Iris-setosa	5.8	4.0	1.2	0.2
16	Iris-setosa	5.7	4.4	1.5	0.4
17	Iris-setosa	5.4	3.9	1.3	0.4
18	Iris-setosa	5.1	3.5	1.4	0.3
19	Iris-setosa	5.7	3.8	1.7	0.3
20	Iris-setosa	5.1	3.8	1.5	0.3
21	Iris-setosa	5.4	3.4	1.7	0.2
22	Iris-setosa	5.1	3.7	1.5	0.4
23	Iris-setosa	4.6	3.6	1.0	0.2
24	Iris-setosa	5.1	3.3	1.7	0.5
25	Iris-setosa	4.8	3.4	1.9	0.2
26	Iris-setosa	5.0	3.0	1.6	0.2
27	Iris-setosa	5.0	3.4	1.6	0.4
28	Iris-setosa	5.2	3.5	1.5	0.2
29	Iris-setosa	5.2	3.4	1.4	0.2
30	Iris-setosa	4.7	3.2	1.6	0.2
31	Iris-setosa	4.8	3.1	1.6	0.2
32	Iris-setosa	5.4	3.4	1.5	0.4
33	Iris-setosa	5.2	4.1	1.5	0.1
34	Iris-setosa	5.5	4.2	1.4	0.2
35	Iris-setosa	4.9	3.1	1.5	0.1
36	Iris-setosa	5.0	3.2	1.2	0.2
37	Iris-setosa	5.5	3.5	1.3	0.2

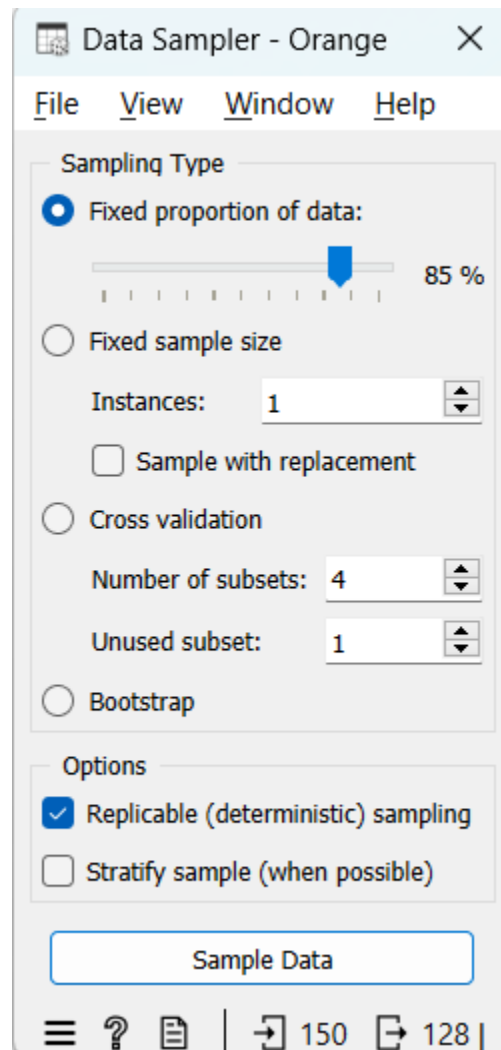
3. Memeriksa sebaran data menggunakan scatter plot



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

Logistic Regression - Ora... X

Name

Logistic Regression

Regularization type:

Ridge (L2) v

Strength:

Weak Strong

C=1

☐

Balance class distribution

☒

Apply Automatically

≡ ? 📄 | ↗ 128 | ↖ 5 | 🗑

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

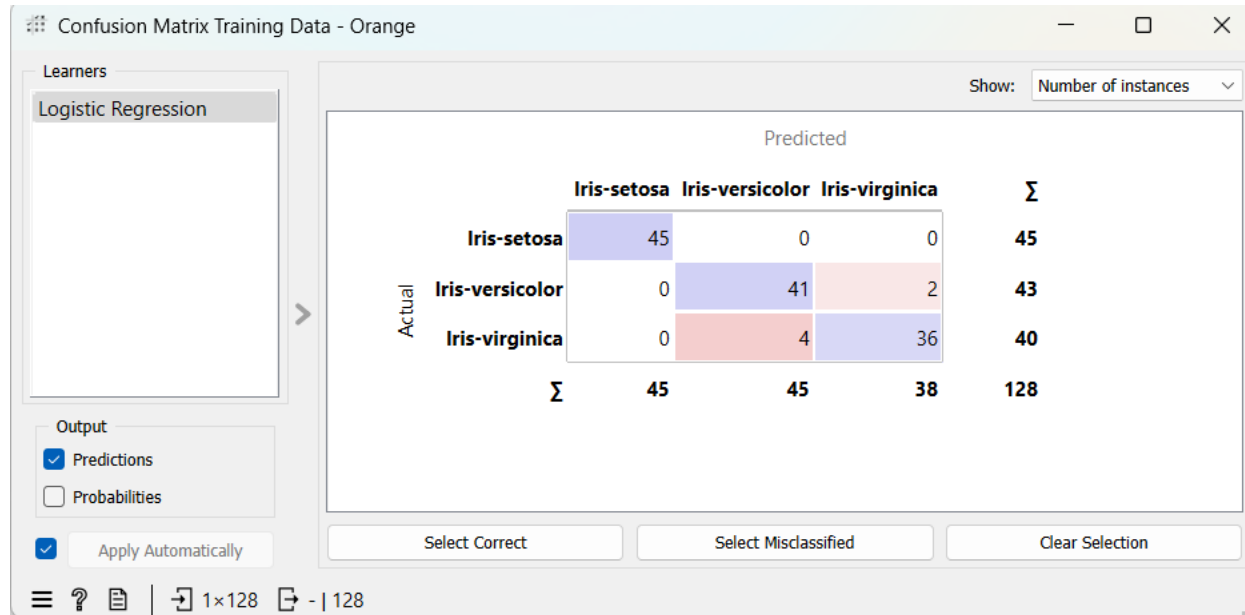
☐ Negligible diff.: 0.1

Logistic Regression	Logistic ...

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.

128 | 22 | 128 | 1x128

8. Melakukan visualisasi pada hasil training menggunakan confusion matrix



9. Melakukan prediksi dan membandingkan hasilnya dengan test data

The screenshot shows the 'Predictions - Orange' window. The 'Show probabilities for' dropdown is set to 'Classes in data'. The 'Show classification errors' checkbox is checked. The table displays 22 rows of data, each with a probability distribution for the three classes, the actual species, and the predicted species. The bottom section shows performance scores for the Logistic Regression model.

	Logistic Regression	error	Species	SepalLengthCm	SepalWidthCm	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

Performance scores table:

Model	AUC	CA	F1	Prec	Recall	MCC
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

